Wahler Associates

Geotechnical and Water Resources Engineering

Phase II Hydrogeologic Investigation

JASCO Chemical Corporation

Mountain View, California

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November 3, 1987

AR0029

Mr. Steven Morse
South Bay Division Chief
California Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6040
Oakland, California 94607

Re: Jasco Chemical Corporation, 2189.8210 (DLH)

Dear Mr. Morse:

Enclosed is our Phase II Hydrogeologic Investigation for the JASCO site.

Should you have any questions concerning this report, please do not hesitate to contact me at your earliest convenience.

Sincerely,

James L. Jaffe

JAMES L. JAFFE

JLJ/jal
enclosure

cc: Mr. Dan Thomas
Firoz (Nick) Homayoungar, Ph.D.
Elizabeth Cameron

0816-000271

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Phase II Hydrogeologic Investigation

JASCO Chemical Corporation

Mountain View, California

Prepared for:

BRONSON, BRONSON, AND MCKINNON

November, 1987

WAHLER ASSOCIATES

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1023 Corporation Way
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Telephone (415) 968-6250

Project JCO-104H

Wahler Associates

Geotechnical and Water Resources Engineering

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November 5, 1987
Project JCO-104H

Mr. James L. Jaffe
Bronson, Bronson and McKinnon
Bank of America Center
555 California Street
San Francisco, California 94104

Dear James,

Enclosed is a copy of our report describing the results of the Phase II Hydrogeologic Investigation performed at and in the vicinity of Jasco Chemical Corporation in Mountain View, California. Please do not hesitate to call if you have any questions regarding the topics discussed in this report.

Sincerely,

WAHLER ASSOCIATES

Robert G. Breynaert
Project Manager

F. H. L. Nick

F. Homayounfar
Department Head
Environmental Services

BB:FH:1

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TABLE OF CONTENTS

TABLES

FIGURES

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TABLE OF CONTENTS (Cont'd)

FIGURES

APPENDICES

EXECUTIVE SUMMARY

SCOPE OF WORK

- A Phase II hydrogeologic investigation was conducted from August through October 1987, at and in the vicinity of Jasco Chemical Corporation facility in Mountain View, California. The objectives of the investigation were: (1) To monitor spatial and temporal changes in the concentration of chemicals within the A-aquifer; (2) To better define the A-aquifer ground water gradient during non-pumping conditions at and in the vicinity of the Jasco facility; (3) To determine if off-site migration of chemicals has occurred within the B_1-aquifer; (4) To develop an understanding of the B_1-aquifer direction of ground water flow and magnitude of gradient; and (5) To assess the stratigraphy and hydrogeologic conditions north of the Jasco site, in particular, the vertical and lateral extent of the aquitard separating the A and B_1- aquifers.

- Two B_1-aquifer wells, I-2 and I-3, were installed on the median of the Central Expressway (Figure E-1) as part of this investigation. Two additional A-aquifer wells (V-8 and V-9) will be installed north of the Central Expressway as soon as the necessary permits are secured. V-8 and V-9 will aid in defining the northern extent of chemicals within the A-aquifer. Two rounds of ground water sampling and analysis were conducted at all newly installed and previously existing wells. In addition, four rounds of ground water level measurements were taken for all on and off-site wells.

CONCLUSIONS

- Four higher permeability units: the Vadose Higher Permeability Zone, (VHPZ), A-aquifer, B_1-aquifer and the B_2-aquifer exist in the upper 70 feet of section on the Central Expressway. The vertical permeabilities of the higher permeability units, which range from 5.2×10^{-5} cm/sec to 2.3×10^{-4} cm/sec, are in the low end of the expected range for the types of soils encountered, due to the soils containing a relatively high percentage of fine-grained material. The VHPZ, A-aquifer, and B_1-aquifer are of sufficiently low permeability to retard the vertical migration of ground water to deeper aquifers.

- The higher permeability units are separated by four lower permeability units: the Vadose Lower Permeability Zone (VLPZ), a lower permeability unit overlying the A-aquifer, the A-B_1 aquitard, and the B_1-B_2 aquitard. The vertical permeabilities of the A-B_1 aquitard and the B_1-B_2 aquitard, which range from 2.3×10^{-8} cm/sec to 3.1×10^{-7} cm/sec, are of sufficiently low permeability to significantly retard the vertical migration of ground water to deeper aquifers. The VLPZ had a higher vertical permeability than expected due to the presence of rootlet holes and rootlets in the samples.

- The general direction of ground water flow is N30°E within the A-aquifer and N15°E in the B_1-aquifer. The A-aquifer magnitude of gradient is 0.004 ft/ft. The B_1-aquifer magnitude of gradient is 0.003 ft/ft.

- The highest chemical concentrations were observed in A-aquifer wells V-2 and V-4, wells which have shown a significant reduction in chemical concentration over the past six to ten months. Off-site migration of 1,1,1-TCA, 1,1-DCA and 1,1-DCE, has been documented in A-aquifer wells V-6 and V-7 located 121 feet north, and 140 feet northeast of the Jasco site (Figure E-1). The northern extent of chemical migration within the A-aquifer will be better defined after the installation of the two additional A-aquifer monitoring wells. The western boundary of chemicals in the A-aquifer lies adjacent to well V-6. The eastern boundary lies between wells V-4 and V-5.

- Low concentrations of 1,1,1-TCA, 1,1-DCA, and 1,1-DCE were identified in B_1-aquifer well I-2 and 1,1,1-TCA, and 1,1-DCA within I-1 during the August round of chemical testing. In the September round, chemicals were not detected in I-2. Low concentrations of both 1,1,1-TCA and 1,1-DCA were also detected in I-1 during the September sampling. Of the chemical concentrations detected in wells I-1 and I-2, only the 1,1-DCE identified in the August sampling of I-2 was above the DOHS recommended action level; 1,1-DCE was not detected in I-2 during the September sampling. Chemical concentrations were not detected in well I-3 during the August sampling. Phenol, which had not been detected previously in any of the on and off-site monitoring wells, was detected in well I-3 during the September sampling. Future sampling episodes are necessary before an accurate assessment can be made regarding the presence or absence of chemical concentrations within B_1-aquifer wells I-2 and I-3.

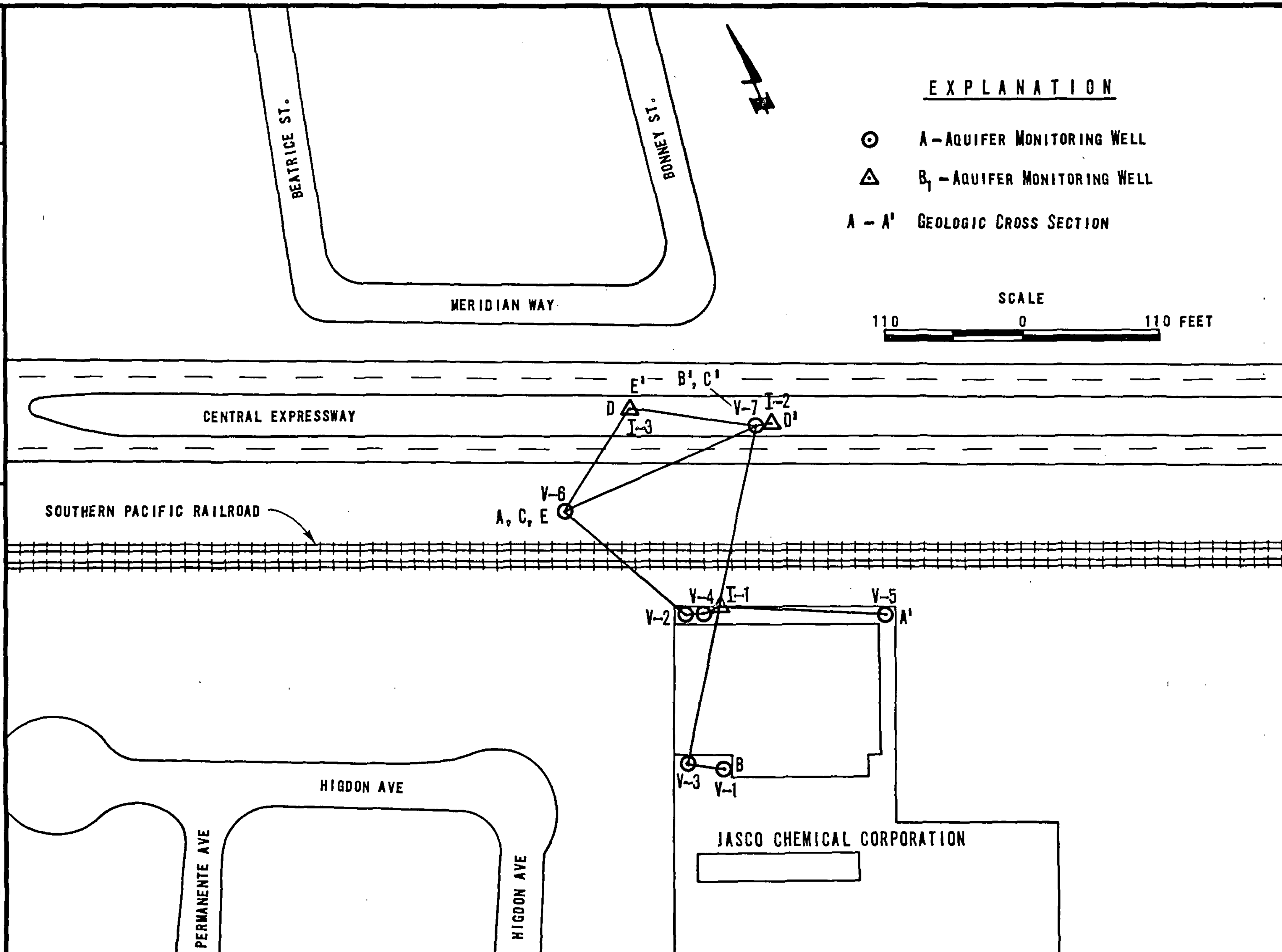
- A substantial reduction in the concentration of methylene chloride, 1,1,1-TCA and 1,1-DCA has been observed over the past 10 months in well V-2 and the past six months in well V-4. The reduction in concentration was induced by ground water extraction from wells V-2 and V-4. A second trend, which supports this conclusion is that an increase in the concentration of MCL, TCA, and DCA in V-2, and DCA in V-4 was observed after extraction from V-4 was stopped on August 21, 1987. These data indicate that the ground water extraction from V-4, which continues to this date, has been successful in reducing chemical concentrations within the A-aquifer at the locations where the highest concentrations have been observed.

Wahler Associates

JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

A AND B_1 AQUIFER MONITORING WELLS AND GEOLOGIC CROSS SECTIONS

PROJECT NO. JCO-104H
DATE OCTOBER 1987
FIGURE NO. E-1



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PHASE II HYDROGEOLOGIC INVESTIGATION
JASCO CHEMICAL CORPORATION
MOUNTAIN VIEW, CALIFORNIA

A. INTRODUCTION

1. Purpose

This Phase II hydrogeologic investigation report has been prepared to satisfy the requirements of California Regional Water Quality Control Board (CRWQCB) Clean-up and Abatement Order (CAO) No. 87-094 submitted to Jasco Chemical Corporation on August 3, 1987. The objectives of this investigation were: (1) To monitor spatial and temporal changes in the concentration of chemicals within the A-aquifer; (2) To better define the A-aquifer ground water gradient during non-pumping conditions at and in the vicinity of the Jasco facility; (3) To determine if off-site migration of chemicals has occurred within the B_1-aquifer; (4) To develop an understanding of the B_1-aquifer direction of ground water flow and magnitude of gradient; and (5) To assess the stratigraphy and hydrogeologic conditions north of the Jasco site, in particular, the vertical and lateral extent of the aquitard separating the A and B_1- aquifers. This report presents the methods used during the well construction, sampling, and development, an interpretation of the stratigraphy encountered during drilling, maps of the A and B_1-aquifer potentiometric surface, the chemical testing results, and conclusions based on these data. In addition, a section is included on work to be performed in the future.

This report is organized into six sections: (A) An introductory section (B) The well construction, development, and sampling procedures, (C) presentation of the results and interpretation of the site hydrogeology, (D) a discussion of future work to be performed, (E) a conclusions section, and (F) a statement of limitations.

A hydraulic testing report is in preparation at this time which describes the results of pumping and slug tests performed at and in the vicinity of the Jasco site. The hydraulic testing report will assess the performance of the ground water extraction system currently in operation. In addition, the report will contain horizontal hydraulic conductivity estimates for the A-aquifer based on the slug and pumping test data, as well as a section discussing the vertical hydraulic gradient between the A and B_1-aquifers.

2. Background Information

Jasco Chemical Corporation is located at 1710 Villa Street in Mountain View, California (Figure 1). The 2.05-acre Jasco facility is bordered on the north by the Southern Pacific Railroad, main line right-of-way (Figure 2). To the east of the facility is Villa Mariposa, an apartment complex. Single and multi-family dwellings located along Higdon Avenue border the Jasco site to the west. Villa Street is located south of the Jasco site.

A preliminary investigation was performed at the Jasco facility by Questa Engineering from May of 1984 through December of 1986. Three A-aquifer monitoring wells, V-1, V-2, and V-3, were installed during that phase of the investigation.

Wahler Associates was retained by Jasco in December of 1986 to continue the preliminary investigation at the Mountain View facility. On December 19, 1986, a shallow soil gas investigation was performed at the Jasco facility and surrounding area. For a complete discussion of the sampling strategy, sampling procedures, and results, consult the draft report prepared by Wahler Associates dated January 19, 1987.

On June 5, 1987 a phase I hydrogeologic investigation report was submitted to the CRWQCB. During that phase of the investigation four A-aquifer monitoring wells V-4 through V-7, and one B_1-aquifer monitoring well, I-1, were installed. On June 26, 1987 a site inspection report was submitted to the CRWQCB on behalf of Jasco Chemical Corporation. An on-site source identification investigation report was submitted to the CRWQCB on July 6, 1987. Eight 21.5-foot exploratory soil borings were advanced during that phase of the investigation.

3. Scope of Work Performed

As part of the Phase II program, two B_1-aquifer monitoring wells, I-2 and I-3, were installed. The well construction information for I-2 and I-3 is contained in Table 1. In the Phase II proposal dated July 7, 1987, it was stated that two additional A-aquifer monitoring wells would be installed as part of this program. The two A-aquifer wells have not been installed as of the writing of this report due to permitting difficulties. At this time, a permit has been obtained from the City of Mountain View authorizing that one of the wells be installed on city property. The second A-aquifer monitoring well is stated to be installed in County of Santa Clara owned property. A right-of-entry permit will be obtained from the county before drilling begins. In addition to the well installation, weekly water-level measurements were taken from both the newly installed and previously existing wells (Table 2). After ground water elevations were calculated from the water level data (Table 3), maps were prepared showing both the ground water gradient and direction of ground water flow.

Ground water samples were obtained from monitoring wells V-1 through V-7 and I-1 through I-3 on August 27-28, 1987 and September 24-25, 1987. Chemical testing was performed on the ground water samples. The testing program was designed to include those chemicals that are at present, or were in the past, stored at the Jasco facility (Table 4). The scope of chemical testing followed the suggested program outlined in the July 15, 1987 letter from Mr. Steve Morse of the CRWQCB to Mr. James Jaffe. During both rounds of testing, ground water samples from the existing on and off-site wells (V-1 through V-7 and I-1) were analyzed for: purgeable halocarbons and aromatics according to EPA Methods 601/602 plus analysis for methyl ethyl ketone (MEK) and xylenes, phenols according to EPA Method 604, total hydrocarbons as paint thinner, and alcohols/acetone. The ground water samples from wells I-2 and I-3 obtained on August 28, 1987 were analyzed for purgeables according to EPA Method 624. Open scans were also performed on the ground water from I-2 and I-3 to determine the presence of any non-priority volatile organics within the samples. The same testing program used for wells V-1 through V-7 and I-1 was followed during the September 25, 1987 sampling of I-2 and I-3. A more detailed discussion of the well installation, development and sampling procedures will be presented below.

B. WELL CONSTRUCTION, DEVELOPMENT AND SAMPLING PROGRAM

1. Well Construction Methods

The main objective in installing monitoring wells I-2 and I-3 was to determine the presence or absence of chemicals in B_1-aquifer ground water to the north of the Jasco site. To ensure that the installation of wells I-2 and I-3 did not result in the cross-contamination of the A- and B_1 aquifers, well I-1 was installed in three steps: (1) a pilot boring was drilled using a CME-75 drill rig. The pilot borings were drilled to accurately determine the position of the contact between the A-aquifer and the underlying A-B_1-aquitard. Soil samples were obtained using a 5-foot long, 2.5-inch diameter continuous sampler. Continuous sampling was performed in lieu of drive sampling because continuous sampling allows a complete section of sediment to be recovered, thereby permitting accurate identification of high and low permeability zones. Before drilling each 5-foot section, the continuous sampler was inserted into the hollow-stem auger so that the core cutter at the base of the sampler was flush with the base of the auger. As the auger turned into the soil, the continuous sampler remained stationary within the hollow-stem. This allowed an undisturbed, continuous, five-foot section of soil to be recovered with each section of hollow-stem auger that was advanced down-hole. In advance of pushing the continuous sampler down-hole, two, 2.5-inch diameter, 2.5-foot-long plastic core liners were placed inside the sampler. After a 5-foot interval was drilled, the sampler was recovered from the hollow-stem auger, and the core liners removed. The sediments were then examined within or removed from the core liners to facilitate logging the soils and to determine the stratigraphy. After field logging, the soil samples were carefully placed back into the core liners, sealed, and placed in storage at Wahler Associates' Palo Alto offices. The soil borings were logged in the field by a Wahler Associates' geologist, under the supervision of a certified engineering geologist. The stratigraphy encountered during drilling is summarized in the boring logs located in Appendix A. After drilling was terminated each of the pilot borings was backfilled to the surface with cement grout; (2) Following the drilling of the pilot borings, steel conductor casings were installed adjacent to the location of the pilot borings using a Failing 1500 mud rotary drill rig. The conductor casing borings were first drilled to 40.0 feet, in the case of I-2, and 29.0 feet at I-3. Following the drilling, the conductor casings were installed then pushed two feet into the A/B_1 aquitard material using the drill rig. The casings were then grouted into place by pumping cement grout into the annulus through a tremie pipe; the grouting was done under the supervision of a Santa Clara Valley Water District (SCVWD) inspector; (3) After allowing sufficient time for the grout to set, the conductor casings were entered by the Failing-1500 drill rig, and secondary borings drilled into the B_1-aquifer at each well site.

The boring for I-2 was terminated five feet into the underlying B_1-B_2 aquitard. The bottom five feet of boring I-2 was backfilled with bentonite pellets, up to the B_1-aquifer/B_1-B_2 aquitard contact. B_1-aquifer monitoring well I-2 was completed using 2-inch schedule 40, flush-threaded PVC casing with 0.010-inch, factory-made slots. A No. 3 sand pack was tremied into position around the slotted portion of the casing. A 2-foot bentonite seal was placed above the sand pack. After the bentonite pellets had enough time to form a reliable seal, a sanitary seal consisting of cement grout containing five percent powdered bentonite was tremied into place under the supervision of a SCVWD inspector. While the cement was still moist, an above-ground, steel, locking well cover was installed over the PVC well casing. Table 1 and Figure 4 contain the well construction information for well I-2.

During the construction of the secondary boring for well I-3, the contact between the B_1-aquifer and the B_1-B_2 aquitard was encountered at 56.5 feet, two feet deeper than in boring I-2 (see boring log Appendix A). At I-2, at least five feet of blue-gray sandy clay exist below the B_1-aquifer. At I-3, only one-foot of the same type of sandy clay was encountered below the B_1-aquifer. Below this clay layer, which extended from 56.5 to 57.5 feet, aquifer material consisting of gravelly sand was encountered to a depth of 71.0 feet. When it became apparent that a competent clay aquitard with a minimum thickness of five feet did not exist at the same stratigraphic interval as that encountered at I-2, a field decision was made to screen well I-3 in the same stratigraphic interval as I-2. To accomplish this, the boring was backfilled from 71.0 feet to 59.0 feet with No. 3 sand and then to 56.0 feet with bentonite pellets. The bentonite was placed from 1.5 feet below the blue-gray sandy clay layer to 0.5 feet above the clay, a total of 3.0 feet. This conservative approach to the construction of I-3 was taken because it was interpreted that the blue-gray sandy clay interval encountered in both I-2 and I-3 is the same stratigraphic unit, which is designated as the B_1/B_2 aquitard. Wahler Associates is of the opinion that it is prudent to terminate a well above what is interpreted to be an aquitard unit even though it is less than five feet in thickness rather than screening a well through a potential aquitard. After drilling was terminated, monitoring well I-3 was completed using 2-inch, schedule 40, flush-threaded, PVC casing with 0.010-inch factory-made slots. The well was sand packed, sealed, and completed using the same techniques as well I-2. Table 1 and Figure 3 contain the well construction information for B_1-aquifer well I-3.

During the drilling of wells I-2 and I-3, soil samples were taken using a continuous sampler, in the case of the pilot borings (see above), and with a California modified (Calmod) sampler equipped with 2.5-inch inside diameter brass liners during the mud rotary drilling. A 140-pound hammer falling 30 inches was used to drive the Calmod sampler. Soil samples were inspected in the field to determine the stratigraphy. The soil borings were logged by a Wahler Associates geologist under the supervision of a certified engineering geologist.

After installation, the top of the protective casing and the ground surface at each well location were surveyed by a State of California certified surveyor. The top of the protective casing (cover open) was used as the reference elevation in the calculation of the ground water elevation data. The elevation data are presented in Table 2.

Five soil samples from each boring were tested for the following set of properties at Wahler Associates' materials testing laboratory. The property tests performed include: natural and as tested water content and dry density, vertical permeability, grain-size distribution, and Atterberg limits. The grain-size distribution data were used to aid in the classification of key aquifer and aquitard units. The vertical permeability data were used to assess the lateral variability in vertical permeability within discrete stratigraphic units and also the variation with depth in a particular boring. A discussion of the materials testing procedures as well as the test results are included in Appendix B. The materials testing results will be discussed in the results section of this report.

2. Well Development

After installation, each well was developed with pressurized nitrogen. Steam-cleaned PVC tubing was lowered to the bottom of each well and secured at the surface with duct tape. Pressurized dry nitrogen was then injected through the tubing at 50-100 psi displacing the standing water in each well. The process was repeated until the ground water was free of fine sand and other sediment. A total of 110 gallons of water were removed from both I-2 and I-3 during the development process.

3. Sampling Program

Before ground water samples were obtained for chemical analysis, 3.0 to 4.5 bore volumes of ground water were removed from each well using a steam-cleaned Teflon bailer. Ground water was removed from each well prior to sampling to ensure that the samples used for chemical analysis were freshly drawn formational ground water, not ground water that had been in the well casing for an undetermined period of time. Two rounds of ground water sampling and analysis were performed: August 27-28, 1987 and September 24-25, 1987.

The ground water samples were taken from each well using a steam-cleaned bailer. A separate bailer was used for each well to reduce the possibility of cross-contamination. After removal, each sample was promptly placed in a chilled cooler and delivered to a State of California Department of Health Services (DOHS) certified laboratory for chemical analysis. The testing program for wells V-1 through V-7 and I-1, is summarized in Table 4 and included EPA Methods 601/602 - purgeable halocarbons and aromatics, EPA Method 604 - phenols, total hydrocarbons as paint thinner, and analysis for alcohols/acetone.

The ground water samples taken from wells I-2 and I-3 during the August 27-28 sampling were analyzed for purgeable compounds using EPA Method 624. An open-scan was also performed on the samples from wells I-2 and I-3 to determine if the ground water contained any non-priority purgeable compounds. During the September 24-25, 1987 sampling, the same set of tests that were performed on wells V-1 through V-7 and I-2 (Table 4) were also performed on ground water samples taken from wells I-2 and I-3. The chemical testing program is outlined in Table 4 and the results are summarized in Table 5 and presented in Appendix C.

4. Ground Water Elevation Measurements

Ground water level measurements have been taken on a weekly basis from all Jasco wells. The ground water depth data along with the elevations of the ground surface and reference points of each well are presented in Table 2. The ground water elevation data are summarized in Table 3. Potentiometric surface maps for the A and B_1-aquifers constructed using data collected on October 7, 1987 are presented in Figures 11 and 12.

C. RESULTS

1. Stratigraphic Interpretation

The boring logs from monitoring wells I-2 and I-3 have been used along with the logs from previously installed wells to construct geologic cross-sections through the study area. Figure 2 shows the locations of the cross-sections and monitoring wells.

Cross-sections D-D' and E-E' have not been presented previously (Figures 9 and 10). Cross-sections A-A', B-B', and C-C' are also presented (Figures 6, 7, and 8). Cross-sections A-A', C-C', and D-D' are oriented roughly perpendicular to the direction of ground water flow. Cross-sections B-B' and E-E' are oriented roughly parellel to the direction of ground water flow.

The stratigraphy encountered in the completed borings can be divided into four relatively permeable zones: the Vadose Higher Permeability Zone, the A-aquifer, the B_1-aquifer, and the B_2-aquifer, separated by zones of lower permeability including the Vadose Lower Permeability Zone, the A-B_1 aquitard, and the B_1-B_2 aquitard. The soil types have been classified according to the Unified Soil Classification System which is summarized on Figure 5.

a. Vadose Lower Permeability Unit - The upper 9 to 18 feet of section encountered in wells V-1 through V-7 and I-1, 2, and 3 consist of clay, and silty, sandy, or gravelly clay. In I-2, a soil sample from approximately 14 feet (I-2,T6) was classified as a CH with a vertical coefficient of permeability of 2.4×10^{-4} cm/sec. A sample from approximately 13 feet in I-3 was classified as a CL, with a vertical coefficient of permeability of 2.5×10^{-4} cm/sec. The vertical permeabilities of the clay samples are much higher than one could expect considering their composition. Laboratory analysis revealed that both of the samples contained rootlets and rootlet holes; features which can increase the permeability of a soil sample.

A lower permeability unit consisting of clay to sandy clay is located between the VHPZ (discussed below) and the A-aquifer. In V-7 and I-2, this unit is located within the vadose zone. In I-3, this lower permeability unit is located within the zone of saturation.

b. Vadose Higher Permeability Zone (VHPZ) - The VHPZ ranges in thickness from a few inches in the case of V-7 and I-2 to 14.9 feet as was observed in V-5. In I-3, the VHPZ consists of 7.8 feet of dark, yellow-brown, silty to gravelly sand. The VHPZ appears to thin towards the northeast, as evidenced by the unit being represented by 7.8 feet of gravelly and silty sand in I-3, a 0.9-foot layer of gravelly clay in I-2, and by an increase in gravel content within a clay layer in V-7 (Figure 9). This type of deposition pattern is common in an alluvial setting where rapid changes in stratigraphy are observed over short distances, both vertically and laterally.

Properties testing was performed on one VHPZ section sample from I-3 (I-3, T-10). The grain size analysis and vertical permeability testing revealed the soil to be an SP-SM, with a vertical permeability of 5.2×10^{-5} cm/sec, which is rather low for sandy material. Even though the VHPZ is composed of predominantly sandy material, the VLPU has a higher coefficient of permeability, induced by rootlets and rootlet holes present in the clay.

c. A-Aquifer - In wells V-1 through V-7 and I-1, the A-aquifer ranges in thickness from 0.5 to 13.5 feet. In V-7, located adjacent to I-2 on the median of the Central Expressway, the A-aquifer is represented by 13.5 feet of alternating layers of sand, gravel, and clay. In I-2, located 8 feet east of V-7, the A-aquifer is represented by 14.7 feet of gravelly sand and silty sand. Soil sample I-2, T-13, identified in the field as an SM, was determined in the laboratory to be an SW-SM with a vertical permeability of 2.3×10^{-4} cm/sec, which is rather low for this silty sand. From a comparison of the boring logs of I-2, I-3, and V-7, it is apparent that the thickness of the A-aquifer decreases towards the west on the median of the Central Expressway. At I-3, the equivalent of the A-aquifer is recognized as a change in the color of the soil from dark, greenish-gray to yellow-brown, as well as an increase in the sand content of the clayey material (see boring log in Appendix A, Figure 9). A sample of the A-aquifer equivalent material in I-3 was not analyzed in the materials testing laboratory, as it was not recognized as aquifer material in the field.

d. $\underline{A\text{-}B_1 \text{ Aquitard}}$ - The full thickness of the A-B_1 aquitard has been penetrated by B_1-aquifer wells I-1, 2, and 3. The thickness of the A-B_1 aquitard ranges from 6.5 feet at I-1, to 17 feet at I-2, and finally 14 feet at I-3 (Figure 9). The A-B_1 aquitard is composed of clay to sandy clay. Properties testing was performed on two samples of A-B_1 aquitard material. Sample I-2, T-15 was classified as a CL with a vertical permeability of 3.1×10^{-7} cm/sec (Table B-1). Sample T-12 from I-3, was also classified as a CL, but had a slightly higher vertical permeability, 2.8×10^{-6} cm/sec. Rootlets or rootlet holes were not observed in either of the A-B_1 aquitard samples. The vertical permeability data indicate that the A-B_1 aquitard is of sufficient low permeability to substantially retard the vertical migration of ground water to deeper aquifers.

e. $\underline{B_1\text{-Aquifer}}$ - Before the installation of B_1-aquifer monitoring wells I-2 and I-3, the full thickness of the B_1-aquifer had been penetrated only at I-1 where it was composed of gravelly sand (SP-GP) and had an observed thickness of 11.2 feet. At I-2, the B_1-aquifer is composed of 7.5 feet of silty, gravelly, sand, identified in the laboratory as an SW-SM, with a vertical permeability of 2.3×10^{-4} cm/sec. The B_1-aquifer at I-3 is composed of 9.0 feet of gravelly sand, identified in the laboratory as an SW. The vertical permeability observed at I-3, 1.2×10^{-4} cm/sec is similar to that observed for the B_1-aquifer at I-2. The vertical permeability values obtained for soil samples from the B_1-aquifer are similar to the value calculated for the A-aquifer material taken from I-2 (2.3×10^{-4} cm/sec).

f. $\underline{B_1\text{-}B_2 \text{ Aquitard}}$ - At I-2, five feet of B_1-B_2 aquitard material were penetrated before drilling was terminated at 59.5 feet. Laboratory testing revealed the aquitard material to be a CL (field identified as a sandy clay) with a vertical permeability of 2.3×10^{-8} cm/sec. At I-3, a one-foot thick bed of bluish-gray, sandy clay, of the same type as observed in I-2, was found from 56.5 to 57.5 feet (see Figure 9, Appendix B, Table B-1). As discussed above, in the Well Construction Section, drilling continued after penetration of the sandy clay unit until it became apparent that an aquitard of at least five feet in thickness did not exist in I-3 at the same depth range as observed in I-2. A sample taken from the sandy clay unit (I-3, R-6) was identified in the materials laboratory as an SC (clayey sand). Although the sample was identified as an SC, the vertical permeability, 2.9×10^{-7} cm/sec, is typical for aquitard material. Although only one foot of aquitard material exists between the B_1 and B_2-aquifers at I-3, the stratigraphic and permeability data strongly show that first, the same aquitard exists at both locations, and second, the B_1-B_2 aquitard is of low permeability (2.9×10^{-7} cm/sec at I-3 and 2.8×10^{-8} cm/sec at I-2). The permeability data indicate that the B_1-B_2 aquitard is of sufficiently low permeability to substantially retard the vertical migration of ground water to deeper aquifers.

g. <u>B_2-Aquifer</u> - The B_2-aquifer was penetrated only at I-3. During the drilling of I-3, it was observed that the B_1 and B_2 aquifers are very similar in composition, both being composed of dark, yellow-brown gravelly sand. The top of the B_2-aquifer was penetrated at 57.5 feet. I-3 was terminated at 71.0 feet without reaching the bottom of the B_2-aquifer. A total of 13.5 feet of B_2-aquifer material were penetrated.

The vertical permeability data from both the higher and lower permeability units have shed light on the ability of the soils within the study area to vertically transmit ground water. With the exception of the VLPZ, the lower permeability units are of sufficiently low permeability to significantly retard the vertical migration of ground water to deeper aquifers. In addition, although the vertical permeabilities of the aquifer units are within the range of values expected for sandy soils in an alluvial setting, they are on the low end of the expected range due to the aquifer material containing a relatively high percentage of clay and silt. The horizontal permeability and hydraulic conductivity characteristics will be evaluated in the hydraulic testing report which is in preparation. The vertical permeability data are as the name suggests, an assessment of permeability in a vertical direction. They should not be used in calculations of horizontal flow velocity within the aquifer units.

2. Ground Water Elevations

Four episodes of ground water level and elevation data are presented in Tables 2 and 3. Maps of both the A and B_1-aquifer potentiometric surface have been constructed using water level data collected on October 7, 1987 (Figures 11 and 12). All of the data presented in Tables 2 and 3, were collected after ground water extraction from V-4 had been stopped on August 21, 1987, to allow the A-aquifer to recover in preparation for hydraulic testing.

Examination of Figure 11 reveals that at the time the ground water level data were taken, the general direction of ground water flow in the A-aquifer was 30 degrees east of north (N30°E) and the gradient 0.004 ft/ft. The water level data from wells I-1, I-2, and I-3, indicate that the general flow direction of B_1-aquifer ground water is N15°E. The B_1-aquifer ground water gradient is 0.003 ft/ft. The ground water elevation data from the A-aquifer wells indicate that at the time the data were taken, 48 days after cessation of extraction, the A-aquifer had fully recovered.

3. Chemical Analysis Results

The scope of chemical testing performed as part of this Phase II investigation is summarized in Table 4. The results of the chemical analyses are summarized in Table 5 and presented in Appendix C. The laboratory QC data and chromatograms are exhibited in Appendix D. The sample chain of custody/analysis request records are presented in Appendix E. Appendix F contains the ground water sampling parameter records. Figures 13 through 24 display the lateral distribution of chemicals within the A-aquifer at and in the vicinity of the Jasco site. Maps showing the distribution of chemicals in the B_1-aquifer at and in the vicinity of Jasco are shown on Figures 25 and 26. Plots showing the temporal change in chemical concentrations at A-aquifer wells V-2 and V-4 are shown on Figures 27 and 28.

a. Lateral Distribution of Chemicals Within the A-aquifer - Two rounds of chemical testing were performed on ground water samples taken from A-aquifer wells V-1 through V-7. The first round of sampling was performed on August 27-28, 1987, and the second on September 24-25, 1987. The scope of chemical testing is summarized in Table 4 and discussed in Section B-3. Figures 13 and 14 display the distribution of 1,1,1,-TCA in A-aquifer monitoring wells. The highest concentrations of 1,1,1-TCA were observed in wells V-2 and V-4. 1,1,1-TCA has migrated off-site within the A-aquifer as evidenced by the existence of low concentrations in wells V-6 and V-7. The western boundary of off-site migration is likely located adjacent to well V-6 where 1,1,1-TCA was found at 0.0045 ppm and 0.0025 ppm (Figures 13 and 14). The northern boundary of the plume lies to the north of V-7. The installation of monitoring wells V-8 and V-9 should aid in locating the northern extent of 1,1,1-TCA in A-aquifer ground water. The eastern boundary of the 1,1,1-TCA plume is located between wells V-4 and V-5 (Figures 13 and 14). From the data on hand, the A-aquifer distribution of 1,1-DCA, which is a degradation product of 1,1,1-TCA, is similar to that of 1,1,1-TCA (Figures 15 and 16), with the exception of well V-6, where 1,1-DCA has not been detected during any of the sampling episodes performed by Wahler Associates.

The A-aquifer distribution of 1,1-DCE, another degradation product of 1,1,1-TCE, is shown on Figures 17 and 18. As with 1,1,1-TCA and 1,1-DCA, the highest concentrations of 1,1-DCA was found in wells V-2 and V-4. The concentration of methylene chloride (MCL) in A-aquifer wells on September 24-25, 1987 is shown on Figure 19. MCL has been found in three A-aquifer wells, V-2, V-3, and V-4. The highest concentration of MCL was found in V-2. Three separate analyses for MCL were performed on ground water samples taken on August 28, 1987 and two on samples acquired on September 25, 1987. The three August analyses, and one of the September analyses are within

0.055 ppm of the mean value, 0.215 ppm. The second September analysis recorded an MCL concentration of 4.600 ppm, which is an order of magnitude higher than both the September duplicate analysis and both of the August analyses. The laboratory responsible for this anomalous result has been asked to check the reliability of the 4.600 ppm value.

A number of other chemical species have been identified in samples from wells V-1 through V-7. Isoconcentration maps have been prepared for only those chemical species which are present in three of more wells. The balance of the A-aquifer chemical analyses are summarized on Figures 20 through 24.

b. Lateral Distribution of Chemicals Within the B_1-Aquifer - Two rounds of chemical testing were performed on ground water samples taken from B_1-aquifer wells I-1, I-2 and I-3. Very low concentrations of 1,1,1-TCA and 1,1-DCA, below State of California DOHS recommended action levels, were identified in both the August 28, 1987 and September 25, 1987 samples taken from I-1 (Figures 25 and 26). The August sampling of well I-2, revealed 1,1,1,-TCA and 1,1-DCA in concentrations below DOHS action levels and 1,1-DCE slightly above the DOHS action level. In the September sample, the same compounds were non-detectable in I-2 at a detection limit of 0.0005 ppm. Additional chemical testing is required before a reliable determination can be made regarding the presence or absence of chemicals in well I-2. None of the chemicals tested for were detected in the August sample from I-3. One compound, phenol at 0.020 ppm, was detected in the September sample. The DOHS action level for phenol is 0.001 ppb. Since phenol has not been detected in any of the other monitoring wells in the Jasco study area, it is unknown whether the chemical was introduced as a laboratory contaminant or is actually present in the ground water at this location. Additional testing of ground water from I-3 will verify if phenol continues to be present in the ground water at this location.

It should be noted that of the chemicals found in the B_1-aquifer wells, only phenol in I-3 and 1,1-DCE in I-2 exceeded the DOHS recommended action levels. In addition, both of the chemical species were not detected in the additional sampling that was performed.

c. Temporal Changes in Chemical Concentrations Within the A-Aquifer - Temporal changes in the concentration of chemicals within A-aquifer monitoring wells have been observed over the past nine months. As discussed above, the highest chemical concentrations have been observed in wells V-2 and V-4. Figures 27 and 28 display the temporal variation in the concentrations of methylene chloride (MCL), 1,1,1-TCA (TCA) and 1,1-DCA (DCA) over the past nine months in the case of V-2, and five months in the case of V-4. MCL, TCA, and DCA were chosen for display because of the chemicals tested for, these three chemicals have been found in the highest concentration. Also plotted on Figures 27 and 28 are the time periods during which ground water was being extracted from V-2 and V-4. Day zero on each of the figures corresponds to the first day a ground water sample was taken from each of the wells: December 17, 1986 in the case of V-2 and April 3, 1987 for V-4. Ground water extraction from V-2 began on February 20, 1987 (day 66) and ended April 10, 1987 (day 115) (Figure 27). At V-4, ground water extraction began on April 10, 1987 (day 8) and was temporarily stopped on August 21, 1987 (day 141, Figure 28). Extraction from V-4 was stopped on day 141 to allow the A-aquifer to recover in preparation for the aquifer testing phase of the investigation. Extraction from V-4 was resumed on October 9, 1987. Two episodes of chemical testing were performed during the shutdown period (Figures 27 and 28).

Two trends are apparent from the examination of Figures 27 and 28: during the periods of extraction, a reduction in the concentration of MCL, TCA and DCA was observed. Not shown on Figure 27 are the results for MCL from the December 17, 1986 and February 20, 1987 sampling episodes when MCL was observed at 30.0 and 86.0 ppm. The concentration of MCL decreased from the 86.0 ppm level observed before extraction from both V-2 and V-4 began, to 0.84 ppm observed on June 22, 1987, the last sampling episode before extraction from V-4 was stopped. Examination of Figure 28 also reveals that a decrease in MCL, TCA, and DCA was also observed in V-4 during the period of extraction. Thus, the extraction of ground water has resulted in a substantial reduction in chemical concentrations within the extraction wells during the time interval when ground water was being extracted. In addition, a reduction in concentration occurred in V-2 when V-4 was used for extraction; this indicates that the well V-2 lies within the Zone of Capture of V-4. The second trend observed in Figures 27 and 28 is that an increase in the concentration of MCL, TCA, and DCA in V-2, and DCA in V-4, was observed after extraction from V-4 was stopped on August 21, 1987. This trend lends support to the contention that extraction from V-4 and V-2 has been successful in reducing the concentrations of chemicals in the vicinity of the extraction wells. Future sampling episodes will reveal if the downward trend in the concentration of MCL, TCA, and DCA has resumed as a result of the commencement of extraction from V-4.

D. FUTURE WORK TO BE PERFORMED

This section of the report discusses the work to be completed in the future which will aid in documenting changes in the vertical and lateral extent of chemicals within the A and B_1-aquifers, as well as better defining the northern extent of chemicals within the A-aquifer. As discussed above, two additional A-aquifer monitoring wells are scheduled to be installed north of the Central Expressway as soon as the necessary permits are secured. These two wells will aid in defining the northern extent of chemicals within the A-aquifer.

The ground water sampling program proposed for all on and off-site monitoring wells is outlined below: all A and B_1-aquifer monitoring wells (Figure 2) will be sampled on a quarterly basis. Ground water samples will be analyzed for purgeable halocarbons and aromatics using EPA Method 601/602, including MEK and xylenes, phenols using EPA Method 604, total hydrocarbons as paint thinner, and for alcohols/acetone. Samples will be collected on an annual basis from on and off-site wells and analyzed for purgeables using EPA Method 624 (plus open-scan for non-priority compounds), phenols using EPA Method 604, total hydrocarbons as paint thinner, and alcohols/acetone. The next round of sampling is scheduled to be performed on December 22-23, 1987. The results of the chemical testing will be reported to the CRWQCB within the quarterly reports, the next one of which is due December 15, 1987.

The purging and ground water sampling will be performed using a pre-steam cleaned Teflon bailer. Three or more bore volumes of ground water will be removed from each well before a sample is taken. During the purging process, temperature, pH, and conductivity will be monitored; sampling will not occur until the three parameters have stabilized. Samples will not be filtered in the field. If a sample requires filtering before analysis, the laboratory that performs the analysis will perform the filtering. The ground water samples which will be analyzed using EPA Methods 601, 602, 624, and the scans for total hydrocarbons as paint thinner and alcohols/acetone will be submitted to the laboratory in airtight VOA vials containing Teflon septa. The EPA Method 604 samples will be submitted in one liter, amber, glass jars. After collection, the VOA vials and one liter amber jars will be placed in a chilled cooler. The samples will be kept cool until delivery to a State of California DOHS certified laboratory. After collection, the samples will either be delivered to the laboratory by Wahler Associates' personnel or will be picked up at Wahler Associates' Palo Alto offices by a representative of the laboratory. At the time of sample delivery, chain-of-custody forms will be signed by representatives of Wahler Associates and the laboratory performing the analyses. The laboratory will be instructed to document the quality of the samples delivered as compared to appropriate standards.

The quality assurance/quality control plan for the chemical testing will consist of: one or two duplicates per round of sampling. The actual number will depend on whether one or two days were required to perform the sampling. In addition, one method (equipment rinsate) blank will be submitted per round of sampling. Lastly, one travel blank will be submitted per day of sampling. The duplicates, method blanks and travel blanks will be analyzed for purgeable halocarbons and aromatics using EPA Methods 601/602 plus MEK and xylenes. With every round of sampling results, a quality control data report will be submitted containing the results of the duplicate and spike analyses. Percent deviation and percent recovery data will be included. One such report will be submitted for each testing method performed per round of testing. The laboratory chromatograms of the blanks, standards and actual ground water samples will be submitted with the quality control data report. One set of chromatograms will be submitted for each testing method performed per round of testing.

Each of the laboratory reports will contain the dilution factor and detection limits based on limits of quantification. Each piece of equipment used during the sampling procedures will be steam-cleaned prior to and after use to assure decontamination. In addition, the bailer rope will be changed between wells. A separate bailer will be used per well for each day of sampling. If a bailer has to be used more than once on a particular day, the bailer will be steam-cleaned between uses. Water removed from each well during the purging procedure will be disposed of in the sanitary sewer at the Jasco facility. Jasco Chemical Corporation has a permit from the City of Mountain View to discharge extracted ground water to the sanitary sewer.

In addition to the chemical testing, weekly water level measurements will be taken from all on and off-site wells. The water levels will be measured to the nearest 0.01-foot. The water level data will be collected using an electric water level meter. The measurements will be taken relative to either the top of the protective casing or cristy box. The elevation of the top of protective casing/cristy box, as well as the ground elevation at each well has been surveyed by a State of California certified surveyor. The elevation data, along with the ground water level data, will be used to calculate ground water elevation data. The ground water elevation data along with potentiometric surface maps for the A and B_1-aquifers will be submitted to the CRWQCB as part of the quarterly reports. Water levels will also be taken prior to purging wells during the sampling procedure.

E. CONCLUSIONS

1. Four zones of higher permeability: A vadose zone of higher permeability (VHPZ), the A-aquifer, the B_1-aquifer and the B_2-aquifer exist in the upper 70 feet of section on the median strip of the Central Expressway, approximately 150 feet north of the Jasco site. The VHPZ thins towards the northeast, as it is of minimal thickness in wells V-7 and I-2. The thickness of the A-aquifer decreases towards the west on the median of the Central Expressway. The B_2-aquifer ranges in thickness from 7.5 to 11.2 feet and is fairly uniform in composition in the three boreholes where it has been fully penetrated. The B_2-aquifer is very similar in composition to the B_1-aquifer, in terms of grain-size, color, and water content.

2. The vertical coefficients of permeability determined in the laboratory for the higher permeability units range from 5.2×10^{-5} cm/sec for the VHPZ, to 2.3×10^{-4} cm/sec for both the A and B_1-aquifers. Although the permeability values calculated for the A and B_1-aquifers were in the expected range for the types of soils encountered, they are on the low end of the expected range due to the aquifer material containing a relatively high percentage of clay and silt. The vertical permeability values obtained for the VHPZ, the A-aquifer and the B_1-aquifer are of sufficiently low permeability to retard the vertical migration of ground water to deeper aquifers.

3. The higher permeability zones are separated by low permeability zones which range in composition from silty clay to clayey sand. Four lower permeability units have been identified, the vadose lower permeability zone, (VLPZ), a lower permeability unit overlying the A-aquifer, the A-B_1 aquitard and the B_1-B_2 aquitard.

4. The vertical coefficients of permeability for the lower permeability units ranged from 2.3×10^{-4} cm/sec for the VLPZ, to 3.1×10^{-7} cm/sec for the A-B_1 aquitard, to 2.3×10^{-8} cm/sec for the B_1-B_2 aquitard. The

B_1-B_2 aquitard material from I-3, identified as a clayey sand, had a vertical permeability of 2.9×10^{-7} cm/sec, a value typical of aquitard material. All of the lower permeability units with the exception of the VLPZ of both I-2 and I-3 had vertical permeabilities typical of aquitard material. The VLPZ samples had higher vertical permeabilities due to the presence of rootlets and rootlet holes.

5. The vertical permeability values obtained for the A-B_1 aquitard and the B_1-B_2 aquitard are of sufficiently low permeability to significantly retard the vertical migration of ground water to deeper aquifers.

6. The general direction of ground water flow within the A-aquifer in the vicinity of the Jasco site is N30°E, and the magnitude of gradient is 0.004 ft/ft.

7. The general direction of ground water flow within the B_1-aquifer is N15°E. The magnitude of gradient is 0.003 ft/ft.

8. The highest concentrations of purgeable organic compounds were observed in wells V-2 and V-4, wells which have shown a significant reduction in chemical concentration over the past six to ten months. Off-site migration of 1,1,1-TCA, 1,1-DCA, and 1,1-DCE, within the A-aquifer has been documented in A-aquifer wells V-6 and V-7. The northerly extent of chemical migration in the A-aquifer is not well defined; the installation of wells V-8 and V-9 should aid in locating the northerly extent of chemicals in the A-aquifer. The western boundary of chemicals in the A-aquifer lies adjacent to well V-6. The eastern boundary lies between wells V-4 and V-5.

9. Low concentrations of 1,1,1-TCA, 1,1-DCA, and 1,1-DCE were identified in B_1-aquifer well I-2 and 1,1,1-TCA, and 1,1-DCA within I-1 during the August round of chemical testing. In the September round, chemicals were not detected in I-2. Low concentrations of both 1,1,1-TCA and 1,1-DCA were also detected in I-1 during the September sampling. Of

the chemical concentrations detected in wells I-1 and I-2, only the 1,1-DCE identified in the August sampling of I-2 was above the DOHS recommended action level; 1,1-DCE was not detected in I-2 during the September sampling. Chemical concentrations were not detected in well I-3 during the August sampling. Phenol, which had not been detected previously in any of the on and off-site monitoring wells, was detected in well I-3 during the September sampling. Future sampling episodes are necessary before an accurate assessment can be made regarding the presence or absence of chemical concentrations within B_1-aquifer wells I-2 and I-3.

10. A substantial reduction in the concentration of methylene chloride, 1,1,1-TCA and 1,1-DCA has been observed over the past 10 months in well V-2 and the past six months in well V-4. The reduction in concentration was induced by ground water extraction from wells V-2 and V-4. A second trend which supports this conclusion is that an increase in the concentration of MCL, TCA, and DCA in V-2, and DCA in V-4, was observed after extraction from V-4 was stopped on August 21, 1987. These data indicate that the ground water extraction from V-4, which continues to this date, has been successful in reducing chemical concentrations within the A-aquifer at the locations where the highest concentrations have been observed.

F. LIMITATIONS

The data, information, interpretations, and conclusions contained within this report are presented specifically and solely for Bronson, Bronson and McKinnon. The conclusions and professional opinions presented herein were developed by Wahler Associates, in accordance with currently accepted geologic and hydrogeologic principles and practices. Wahler Associates cannot be responsible for any conclusions and recommendations that may be made by others, unless we have been given an opportunity to review such conclusions and concur in writing.

TABLE 1

WELL CONSTRUCTION INFORMATION (DEPTHS IN FEET)

Well No.	Aquifer	Boring Depth	Casing Depth	Screened Interval	Sand Pack	Diameter	Installation Date	Drilling Method
I-2	B_1	59.5	54.5	49.0-54.5	47.0-54.5	2-inch	8/14-18/87	M
I-3	B_1	71.0	55.0	49.0-55.0	46.5-55.5	2-inch	8/18-20/87	M

Explanation

M - mud rotary

TABLE 2

DEPTH TO GROUND WATER: A AND B_1 AQUIFER WELLS
SEPTEMBER 17, 1987 to OCTOBER 14, 1987

Well Number	Ground Elevation	Reference Elevation	9-17-87	9-23-87	9-29-87	10-7-87
V-1	58.29	58.29	23.49	23.59	23.67	23.71
V-2	57.38	57.38	23.06	23.22	23.23	23.27
V-3	57.60	57.60	22.86	22.89	22.94	23.10
V-4	57.40	58.54	24.22	24.57	24.40	24.47
V-5	58.65	60.14	25.79	25.98	25.95	26.00
V-6	58.10	58.59	24.44	24.49	24.59	24.64
V-7	56.60	56.76	23.05	23.15	23.19	23.22
I-1	58.30	59.22	24.97	25.31	25.15	25.20
I-2	56.80	57.66	23.85	23.89	24.00	24.06
I-3	56.30	57.29	23.55	23.65	23.70	23.77

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TABLE 3

GROUND WATER ELEVATIONS: A AND B-AQUIFER MONITORING WELLS
SEPTEMBER 17, 1987 TO OCTOBER 14, 1987

Well No.	9-17-87	9-23-87	9-29-87	10-7-87
V-1	34.80	34.70	34.62	34.58
V-2	34.32	34.16	34.15	34.11
V-3	34.74	34.71	34.66	34.50
V-4	34.32	33.97	34.14	34.07
V-5	34.35	34.16	34.19	34.14
V-6	34.15	34.10	34.00	33.95
V-7	33.71	33.61	33.57	33.54
I-1	34.25	34.11	34.07	34.02
I-2	33.81	33.77	33.66	33.60
I-3	33.74	33.64	33.59	33.52

TABLE 4

SUMMARY OF CHEMICAL ANALYSES PERFORMED

Well No.	Date	Type of Analysis	Matrix	Laboratory	QC Data	Chromatograms
Jasco Tap	8/20/87	EPA 601	Water	S	Y	Y
Water Tank	8/20/87	EPA 601	Water	S	Y	Y
V-1	8/27/87	EPA 601/602+	GW	S	Y	Y
V-1	8/27/87	THC AS P.T.	GW	S	Y	Y
V-1	8/27/87	ALC/ACET	GW	S	Y	Y
V-1	8/27/87	EPA 604	GW	S	Y	Y
V-2	8/27/87	EPA 601/602+	GW	S	Y	Y
V-2	8/27/87	THC AS P.T.	GW	S	Y	Y
V-2	8/27/87	ALC/ACET	GW	S	Y	Y
V-2	8/27/87	EPA 604	GW	S	Y	Y
V-2	8/27/87	EPA 601/602+	GW	S	Y	Y
V-2	8/27/87	EPA 601/602+	GW	AN	Y	Y
V-3	8/28/87	EPA 601/602+	GW	S	Y	Y
V-3	8/28/87	THC AS P.T.	GW	S	Y	Y
V-3	8/28/87	ALC/ACET	GW	S	Y	Y
V-3	8/28/87	EPA 604	GW	S	Y	Y
V-4	8/27/87	EPA 601/602+	GW	S	Y	Y
V-4	8/27/87	THC AS P.T.	GW	S	Y	Y
V-4	8/27/87	ALC/ACET	GW	S	Y	Y
V-4	8/27/87	EPA 604	GW	S	Y	Y
V-5	8/27/87	EPA 601/602+	GW	S	Y	Y
V-5	8/27/87	THC AS P.T.	GW	S	Y	Y
V-5	8/27/87	ALC/ACET	GW	S	Y	Y
V-5	8/27/87	EPA 604	GW	S	Y	Y
V-6	8/27/87	EPA 601/602+	GW	S	Y	Y
V-6	8/27/87	THC AS P.T.	GW	S	Y	Y
V-6	8/27/87	ALC/ACET	GW	S	Y	Y
V-6	8/27/87	EPA 604	GW	S	Y	Y
V-7	8/28/87	EPA 601/602+	GW	S	Y	Y
V-7	8/28/87	THC AS P.T.	GW	S	Y	Y
V-7	8/28/87	ALC/ACET	GW	S	Y	Y
V-7	8/28/87	EPA 604	GW	S	Y	Y

TABLE 4

SUMMARY OF CHEMICAL ANALYSES PERFORMED (Continued)

Well No.	Date	Type of Analysis	Matrix	Laboratory	QC Data	Chromatograms
I-1	8/27/87	EPA 601/602+	GW	S	Y	Y
I-1	8/27/87	THC AS P.T.	GW	S	Y	Y
I-1	8/27/87	ALC/ACET	GW	S	Y	Y
I-1	8/27/87	EPA 604	GW	S	Y	Y
I-2	8/28/87	EPA 624 Open	GW	S	Y	Y
I-3	8/28/87	EPA 624 Open	GW	S	Y	Y
Method	8/28/87	EPA 601/602+	DI	S	Y	Y
Field	8/28/87	EPA 601/602+	DI	S	Y	Y
V-1	9/24/87	EPA 601/602+	GW	S	Y	Y
V-1	9/24/87	THC AS P.T.	GW	S	Y	Y
V-1	9/24/87	ALC/ACET	GW	S	Y	Y
V-1	9/24/87	EPA 604	GW	S	Y	Y
V-2	9/25/87	EPA 601/602+	GW	S	Y	Y
V-2	9/25/87	THC AS P.T.	GW	S	Y	Y
V-2	9/25/87	ALC/ACET	GW	S	Y	Y
V-2	9/25/87	EPA 604	GW	S	Y	Y
V-2	9/25/87	EPA 601/602+	GW	ANR	N	N
V-3	9/25/87	EPA 601/602+	GW	S	Y	Y
V-3	9/25/87	THC AS P.T.	GW	S	Y	Y
V-3	9/25/87	ALC/ACET	GW	S	Y	Y
V-3	9/25/87	EPA 604	GW	S	Y	Y
V-4	9/25/87	EPA 601/602+	GW	S	Y	Y
V-4	9/25/87	THC AS P.T.	GW	S	Y	Y
V-4	9/25/87	ALC/ACET	GW	S	Y	Y
V-4	9/25/87	EPA 604	GW	S	Y	Y
V-4	9/25/87	EPA 601/602+	GW	S	Y	Y
V-4	9/25/87	EPA 601/602+	GW	ANR	N	N
V-5	9/24/87	EPA 601/602+	GW	S	Y	Y
V-5	9/24/87	THC AS P.T.	GW	S	Y	Y
V-5	9/24/87	ALC/ACET	GW	S	Y	Y
V-5	9/24/87	EPA 604	GW	S	Y	Y
V-6	9/24/87	EPA 601/602+	GW	S	Y	Y
V-6	9/24/87	THC AS P.T.	GW	S	Y	Y
V-6	9/24/87	ALC/ACET	GW	S	Y	Y
V-6	9/24/87	EPA 604	GW	S	Y	Y

TABLE 4

SUMMARY OF CHEMICAL ANALYSES PERFORMED (Continued)

Well No.	Date	Type of Analysis	Matrix	Laboratory	QC Data	Chromatograms
V-7	9/25/87	EPA 601/602+	GW	S	Y	Y
V-7	9/25/87	THC AS P.T.	GW	S	Y	Y
V-7	9/25/87	ALC/ACET	GW	S	Y	Y
V-7	9/25/87	EPA 604	GW	S	Y	Y
I-1	9/25/87	EPA 601/602+	GW	S	Y	Y
I-1	9/25/87	THC AS P.T.	GW	S	Y	Y
I-1	9/25/87	ALC/ACET	GW	S	Y	Y
I-1	9/25/87	EPA 604	GW	S	Y	Y
I-2	9/24/87	EPA 601/602+	GW	S	Y	Y
I-2	9/24/87	THC AS P.T.	GW	S	Y	Y
I-2	9/24/87	ALC/ACET	GW	S	Y	Y
I-2	9/24/87	EPA 604	GW	S	Y	Y
I-3	9/24/87	EPA 601/602+	GW	S	Y	Y
I-3	9/24/87	THC AS P.T.	GW	S	Y	Y
I-3	9/24/87	ALC/ACET	GW	S	Y	Y
I-3	9/24/87	EPA 604	GW	S	Y	Y
Field	9/24/87	EPA 601/602+	DI	ANR	N	N
Field	9/25/87	EPA 601/602+	DI	ANR	N	N
Method	9/25/87	EPA 601/602+	DI	ANR	N	N

Explanation

EPA 601/602+ - EPA Methods 601 and 602 plus MEK and xylenes
THC - Total Hydrocarbons
P.T. - Paint Thinner
ALC - Alcohols
ACET - Acetone
EPA 604 - EPA Method 604
EPA 624 Open - EPA Method 624 plus open scan for NBS spectral library compounds
GW - Ground Water
DI - Deionized Water
S - Sequoia Analytical Laboratories
AN - Anametrix Inc.
ANR - Anresco Inc.
Method - Method blank
Field - Field Blank
Y - Yes
N - No

TABLE 5

SUMMARY OF CHEMICAL ANALYSIS RESULTS (ppm)

Sampling Location	Date	Lab	Analysis	Bromodcm	Chloroform	1,1,1-TCA	1,1-DCA	1,2-DCA	Chloroeth	TCE	1,1-DCE	CIS-1, 2-DCE	TRANS 1,2-DCE
Jasco Tap	8/20/87	S	601	0.00071	0.071	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
Water Tank	8/20/87	S	601	0.0011	0.072	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
V-1	8/27/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.000@)	NA	ND(0.0005)
	9/24/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0039	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.00058	NA	0.0014
V-2	8/27/87	AN	601/602+	ND(0.050)	ND(0.050)	0.200	0.630	ND(0.050)	D	D	D	D	ND(0.050)
	8/27/87	S	a	ND(0.050)	ND(0.050)	0.270	0.630	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	NA	ND(0.050)
	8/27/87	S	601/602+	ND(0.050)	ND(0.050)	0.250	0.570	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	NA	ND(0.050)
	9/25/87	S	a	ND(0.050)	ND(0.050)	0.630	0.490	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	NA	ND(0.050)
	9/25/87	ANR	601/602+	ND(0.010)	ND(0.010)	0.500	0.700	ND(0.010)	0.026	ND(0.010)	0.076	NA	ND(0.010)
V-3	8/28/87	S	a	ND(0.0005)	ND(0.0005)	0.0018	0.015	0.0010	ND(0.0005)	ND(0.0005)	0.0013	NA	0.012
	9/25/87	S	a	ND(0.0005)	ND(0.0005)	0.0011	0.0066	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.00076	NA	0.0091
V-4	8/27/87	S	a	ND(0.005)	ND(0.005)	0.060	0.400	ND(0.005)	ND(0.005)	ND(0.005)	0.036	NA	ND(0.005)
	9/25/87	S	601/602+	ND(0.005)	ND(0.005)	0.031	0.300	ND(0.005)	0.063	ND(0.005	0.016	NA	ND(0.005)
	9/25/87	ANR	601/602+	ND(0.010)	ND(0.010)	0.020	1.000	0.008	0.059	ND(0.020)	0.028	NA	ND(0.010)
	9/25/87	S	a	ND(0.005)	ND(0.005)	0.030	0.310	ND(0.005)	0.039	ND(0.005)	0.014	NA	ND(0.005)
V-5	8/27/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/24/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
V-6	8/28/87	S	a	ND(0.0005)	ND(0.0005)	0.0025	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/24/87	S	a	ND(0.0005)	ND(0.0005)	0.0045	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
V-7	8/28/87	S	a	ND(0.0005)	ND(0.0005)	0.016	0.024	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0019	NA	ND(0.0005)
	9/25/87	S	a	ND(0.0005)	ND(0.0005)	0.023	0.019	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0024	NA	ND(0.0005)
I-1	8/27/87	S	a	ND(0.0005)	ND(0.0005)	0.0019	0.0023	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/25/87	S	a	ND(0.0005)	ND(0.0005)	0.002	0.003	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
I-2	8/28/87	S	624 Open	ND(0.0005)	ND(0.0005)	0.0068	0.014	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0071	NA	ND(0.0005)
	9/24/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
I-3	8/28/87	S	624 Open	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/24/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
Method Blank	8/28/87	S	601/602+	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/25/87	ANR	601/602+	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA	ND(0.010)
Field Blank	8/28/87	S	601/602+	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0002)	NA	ND(0.0005)
	9/24/87	ANR	601/602+	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA	ND(0.010)
	9/25/87	ANR	601/602+	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA	ND(0.010)

TABLE 5 (Continued)

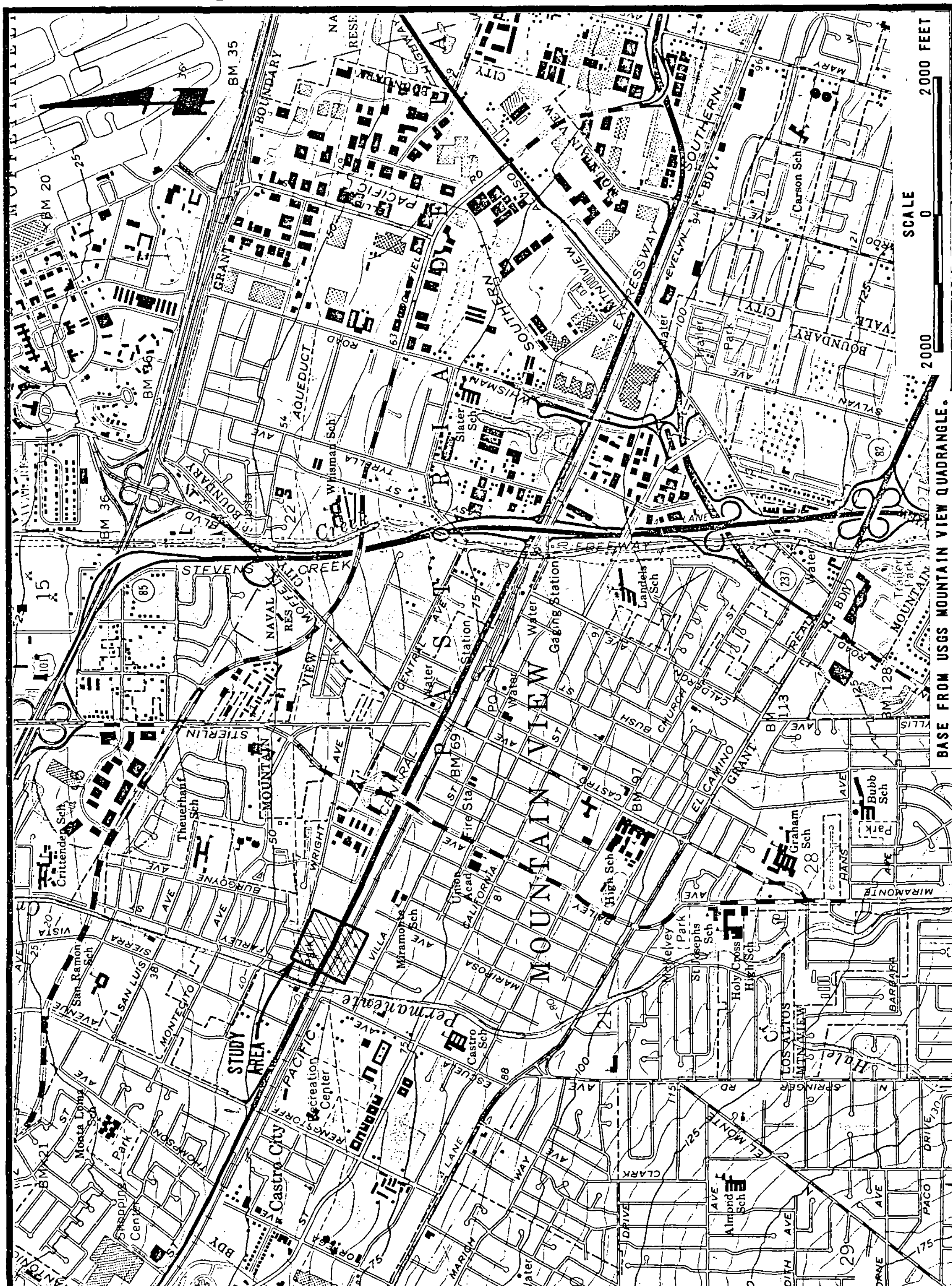
SUMMARY OF CHEMICAL ANALYSIS RESULTS (ppm)

Sampling Location	Date	Lab	Analysis	ACETONE	MEK	MCL	BENZENE	TOLUENE	XYLENE	CHB	V.C.	PHENOL
Jasco Tap	8/20/87	S	601	NA	NA	ND(0.0005)	NA	NA	NA	NA	ND(0.0005)	NA
Water Tank	8/20/87	S	601	NA	NA	ND(0.0005)	NA	NA	NA	NA	ND(0.0005)	NA
V-1	8/27/87	S	a	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/24/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
V-2	8/27/87	AN	601/602+	D	D	1.700	0.020	0.250	0.050	ND(0.050)	ND(0.050)	NA
	8/27/87	S	a	ND(1)	ND(0.050)	0.270	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.001)
	8/27/87	S	601/602+	NA	ND(0.050)	0.200	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	NA
	9/25/87	S	a	0.950	ND(0.0005)	0.220	ND(0.050)	ND(0.050)	0.026	ND(0.050)	ND(0.050)	ND(0.010)
	9/25/87	ANR	601/602+	NA	0.027	4.600	0.007	0.200	0.044	0.037	ND(0.010)	NA
V-3	8/28/87	S	a	ND(1)	ND(0.0005)	0.0063	ND(0.0005)	ND(0.0005)	0.0080	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/25/87	S	a	ND(0.050)	ND(0.0005)	0.012	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.00068	ND(0.010)
V-4	8/27/87	S	a	ND(1)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.001)
	9/25/87	S	601/602+	NA	ND(0.0005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	NA
	9/25/87	ANR	601/602+	NA	ND(0.010)	0.003	ND(0.010)	0.017	ND(0.010)	0.008	ND(0.010)	NA
	9/25/87	S	a	ND(0.050)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.010)
V-5	8/27/87	S	a	ND(1)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/24/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
V-6	8/28/87	S	a	ND(1)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/24/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	0.0019	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
V-7	8/28/87	S	a	ND(1)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/25/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
I-1	8/27/87	S	a	ND(1)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.001)
	9/25/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
I-2	8/28/87	S	624 Open	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0005)	ND(0.0005)	ND(0.010)	ND(0.0005)	ND(0.0005)	ND(0.010)
	9/24/87	S	a	ND(0.0050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.010)
I-3	8/28/87	S	624 Open	ND(0.010)	ND(0.010)	ND(0.0005)	ND(0.0005)	ND(0.005)	ND(0.010)	ND(0.005)	ND(0.0005)	ND(0.010)
	9/24/87	S	a	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.020
Method Blank	8/28/87	S	601/602+	NA	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	NA
	9/25/87	ANR	601/602+	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA
Field Blank	8/28/87	S	601/602+	NA	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	NA
	9/24/87	ANR	601/602+	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA
	9/25/87	ANR	601/602+	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA

Explanation

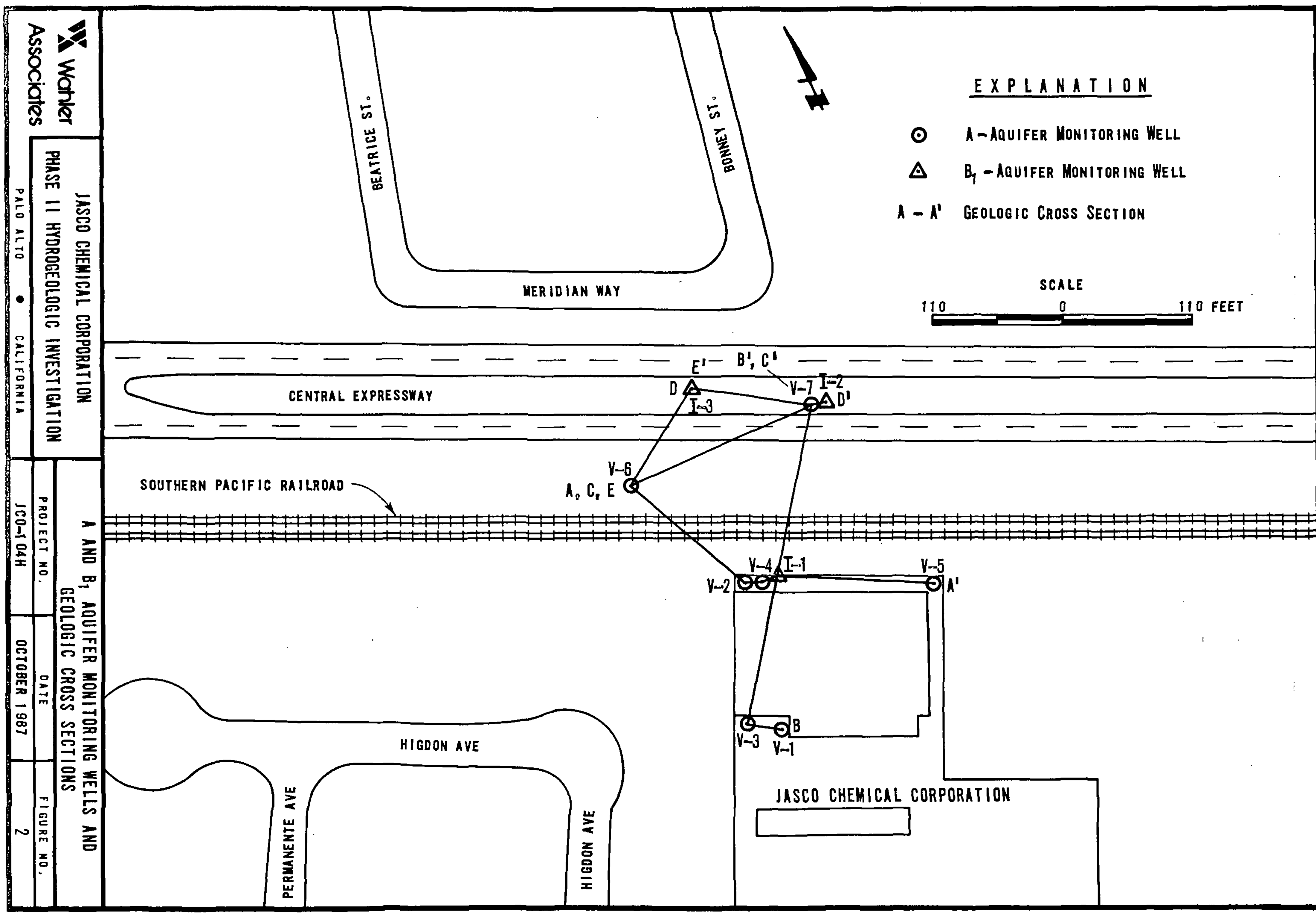
BROMODCM	- Bromodichloromethane	ANR	- Anresco Inc.
CHLORETH	- Chloroethane	601/602+	- EPA Methods 601 and 602, plus analysis for MEK and Xylenes
MCL	- Methylene Chloride	624 Open	- EPA Method 624, plus open scan for NBS spectral library compounds
CHB	- Chlorobenzene	a	- Includes 601/602+, EPA Method 604, total hydrocarbons as paint thinner, and alcohols/acetone.
V.C.	- Vinyl Chloride	ND(0.0005)	- Compound not detected at detection limit of 0.0005 ppm
S	- Sequoia Analytical Laboratory	NA	- Compound not analyzed.
AN	- Anametrix Inc.	D	- Compound was detected below instrument detection limit

00001222



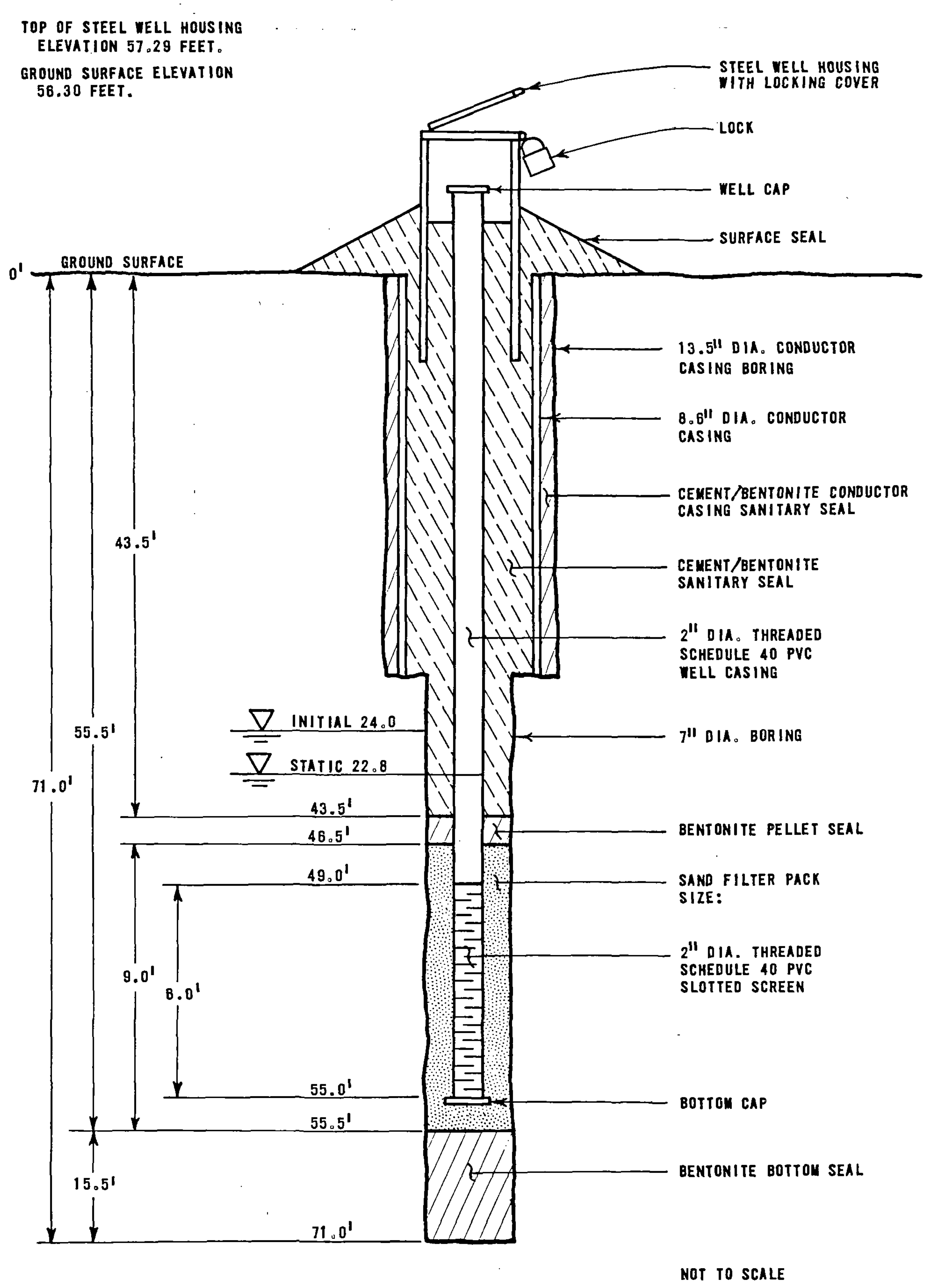
Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION	LOCATION OF STUDY AREA (AREA SHOWN IN FIGURE 2)

	PROJECT NO.	DATE	FIGURE NO.
PALO ALTO • CALIFORNIA	JCO-104H	OCTOBER 1987	1



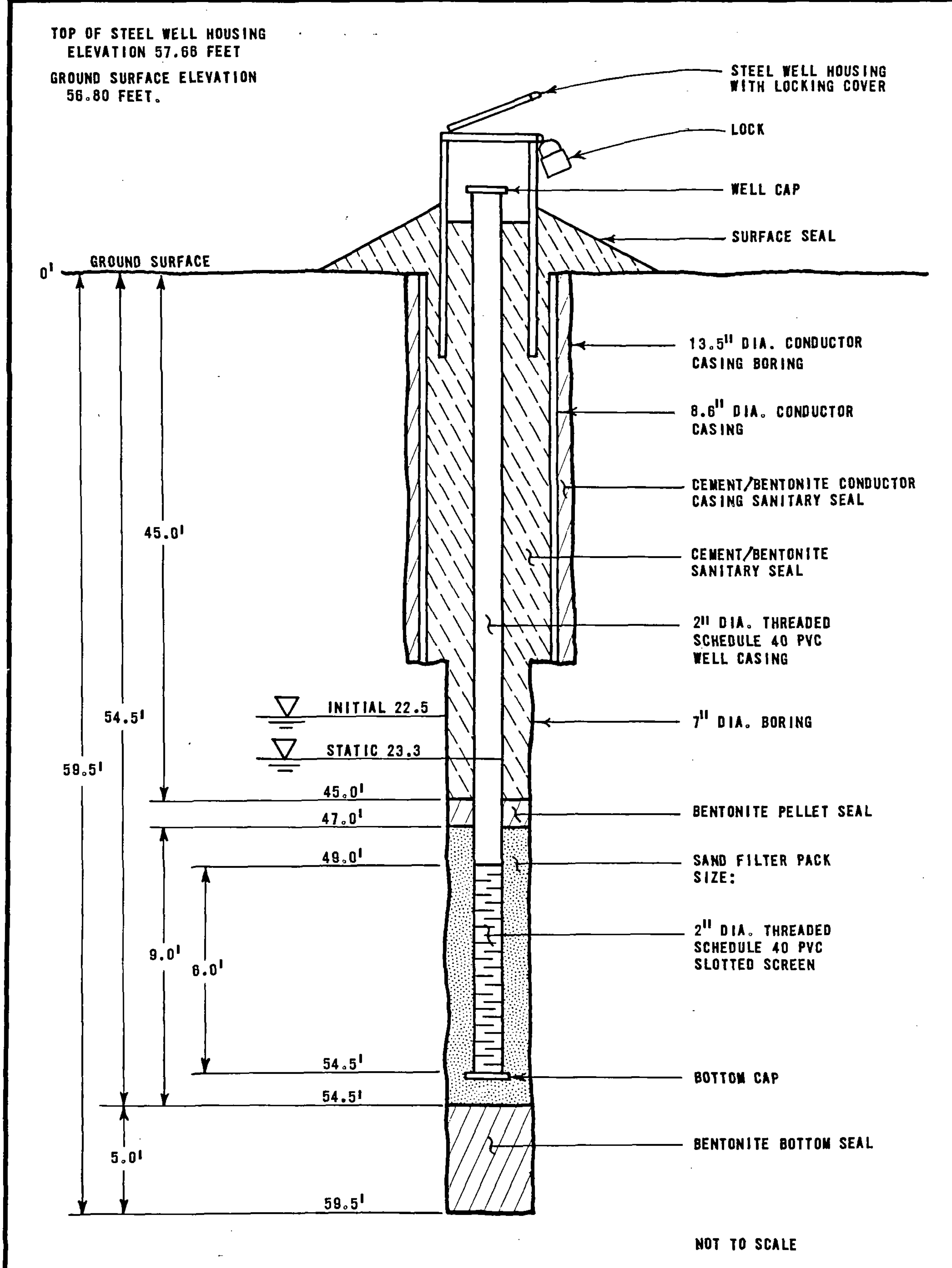
Wahler Associates
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA
A AND B1 AQUIFER MONITORING WELLS AND GEOLOGIC CROSS SECTIONS
PROJECT NO.
JCO-104H
DATE
OCTOBER 1987
FIGURE NO.
2
EXPLANATION
A-AQUIFER MONITORING WELL
B1 -AQUIFER MONITORING WELL
A - A' GEOLOGIC CROSS SECTION
SCALE
110 0 110 FEET
BEATRICE ST.
BONNEY ST.
MERIDIAN WAY
CENTRAL EXPRESSWAY
SOUTHERN PACIFIC RAILROAD
E'
B', C'
D
I-3
V-7
I-2
D'
V-6
A, C, E
V-4
I-1
V-5
V-2
A'
B
V-3
V-1
HIGDON AVE
PERMANENTE AVE
HIGDON AVE
JASCO CHEMICAL CORPORATION

0001222



Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION PALO ALTO ● CALIFORNIA	WELL COMPLETION DIAGRAM OF I-3		
		PROJECT NO.	DATE	FIGURE NO.
		JCO-104H	OCTOBER 1987	3

0000122



Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION	WELL COMPLETION DIAGRAM OF I-2		
		PROJECT NO.	DATE	FIGURE NO.
	PALO ALTO ● CALIFORNIA	JCO-104H	OCTOBER 1987	4

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487)

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS MORE THAN HALF OF MATERIALS IS LARGER THAN #200 SIEVE SIZE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN #4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
			GP	POORLY GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES.
		GRAVEL WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURE. NON PLASTIC FINES.
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES. PLASTIC FINES.
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN #4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES.
			SP	POORLY GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES.
		SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES. NON-PLASTIC FINES.
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES. PLASTIC FINES.
FINE GRAINED SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN #200 SIEVE SIZE	SILTS & CLAYS	LIQUID LIMIT IS LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY.
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY.
	SILTS & CLAYS	LIQUID LIMIT IS GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS.
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS.
	HIGHLY ORGANIC SOILS		PT	PEAT AND OTHER HIGHLY ORGANIC SOILS.

DEFINITION OF TERMS

GRAIN SIZES

U.S. STANDARD SERIES SIEVE

	200	50	16	4	3/4"	3"	6"
SILTS & CLAYS DISTINGUISHED ON BASIS OF PLASTICITY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

MOISTURE CONDITION (INCREASING MOISTURE ⟶)

DRY — SLIGHTLY DAMP — DAMP — (PL) — MOIST — VERY MOIST — WET (SATURATED) (LL)

KEY

SAMPLE NUMBER

SAMPLE CONTAINER:

- BAG........... B
- JAR........... J
- SHELBY TUBE... S
- DRIVE SAMPLER RINGS......... R

FIELD TEST:

- STANDARD PENETRATION... SP

MODE

METHOD OF ADVANCING HOLE:

DRILL

- FLIGHT AUGER........ AD
- BUCKET AUGER........ BA
- SPIN AUGER.......... SD
- HOLLOW STEM AUGER... HA
- ROTARY DRILL........ RD
- CABLE TOOL.......... CT

SAMPLER

- DRIVE............... DR
- PITCHER BARREL...... PB
- CORE................ C
- PUSH................ P

RECOVERY

RECOVERY RATIO INDICATED BY A FRACTION:

$$\frac{1.2}{1.5} = \frac{\text{FOOTAGE RECOVERED}}{\text{FOOTAGE SAMPLED}}$$

REMARKS

INCLUDES DRILLING INFORMATION, E.G. WATER LEVEL, DATES.

REFUSAL: STOPPED BY MATERIAL TOO HARD FOR EQUIPMENT.

TERMINATED: SUFFICIENT INFORMATION OBTAINED.

ABANDONED: STOPPED BECAUSE OF DIFFICULTIES EXPLAINED ON LOG.

PENETRATION RESISTANCE (PR)
(RECORDED AS BLOWS/0.5 FOOT)

SANDS & GRAVELS

RELATIVE DENSITY	BLOWS/FOOT*
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

CLAYS & SILTS

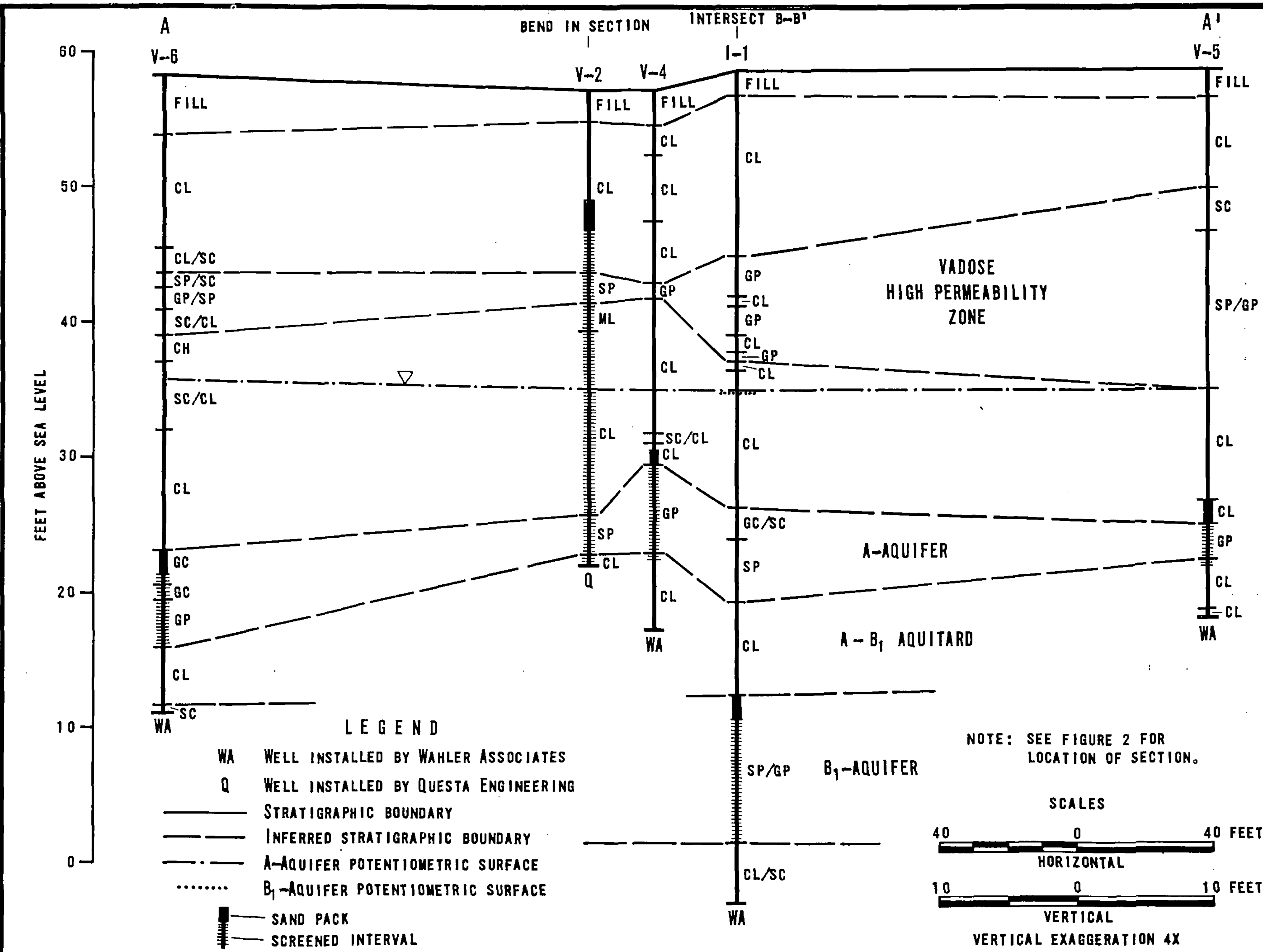
CONSISTENCY	BLOWS/FOOT*	STRENGTH †
VERY SOFT	0-2	0-¼
SOFT	2-4	¼-½
FIRM	4-8	½-1
STIFF	8-15	1-2
VERY STIFF	15-30	2-4
HARD	OVER 30	OVER 4

* Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) Split-Barrel sampler (ASTM-1586 standard penetration test).

† Unconfined compressive strength in tons/sq ft. Read from a pocket penetrometer.

Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION	KEY FOR SOIL EXPLORATION LOGS	
		PROJECT NO.	FIGURE NO.
		JCO-104H	5

154W

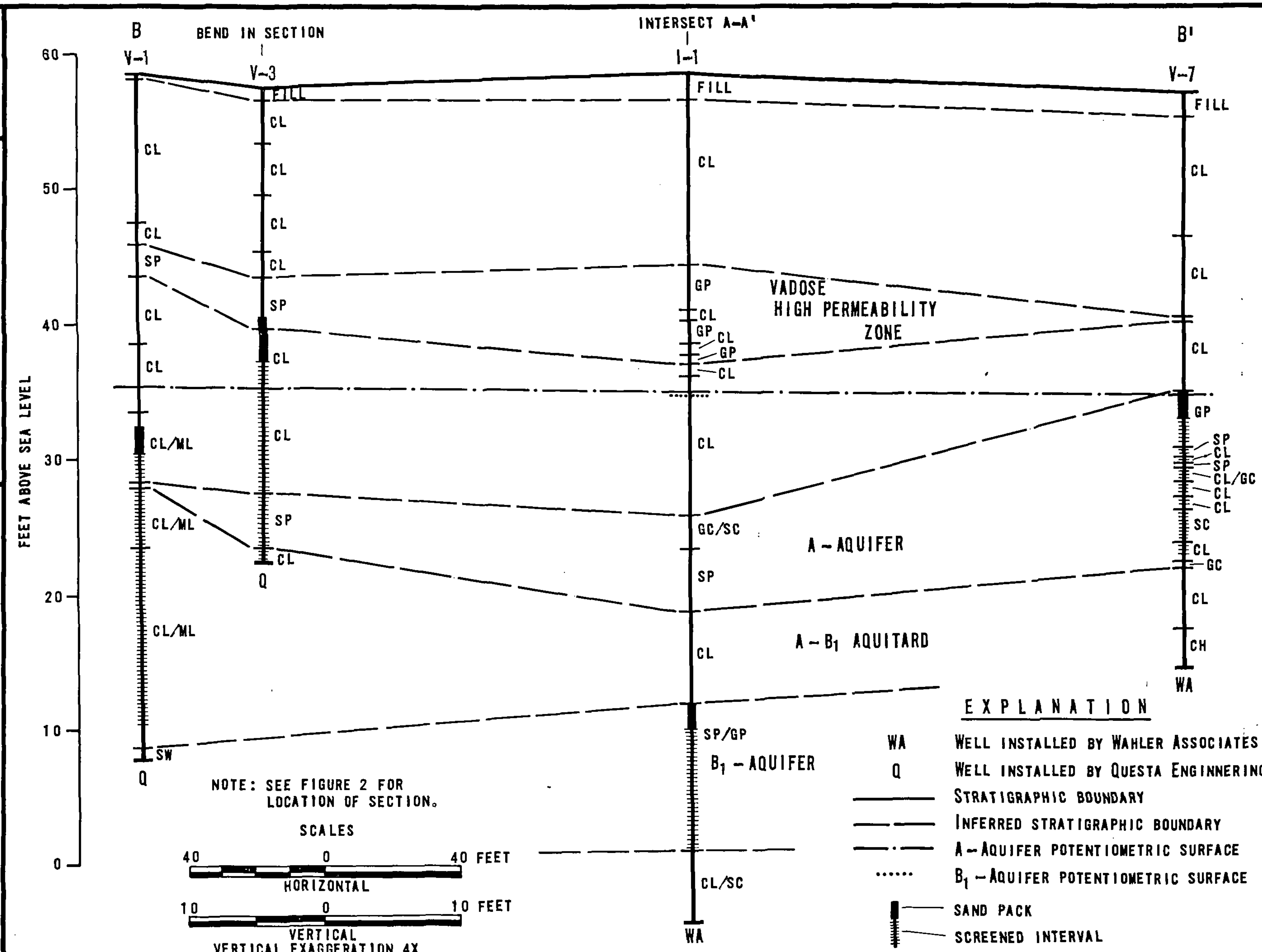


Wahler Associates

JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATON
PALO ALTO • CALIFORNIA

GEOLOGIC CROSS SECTION A-A'

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	6



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JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

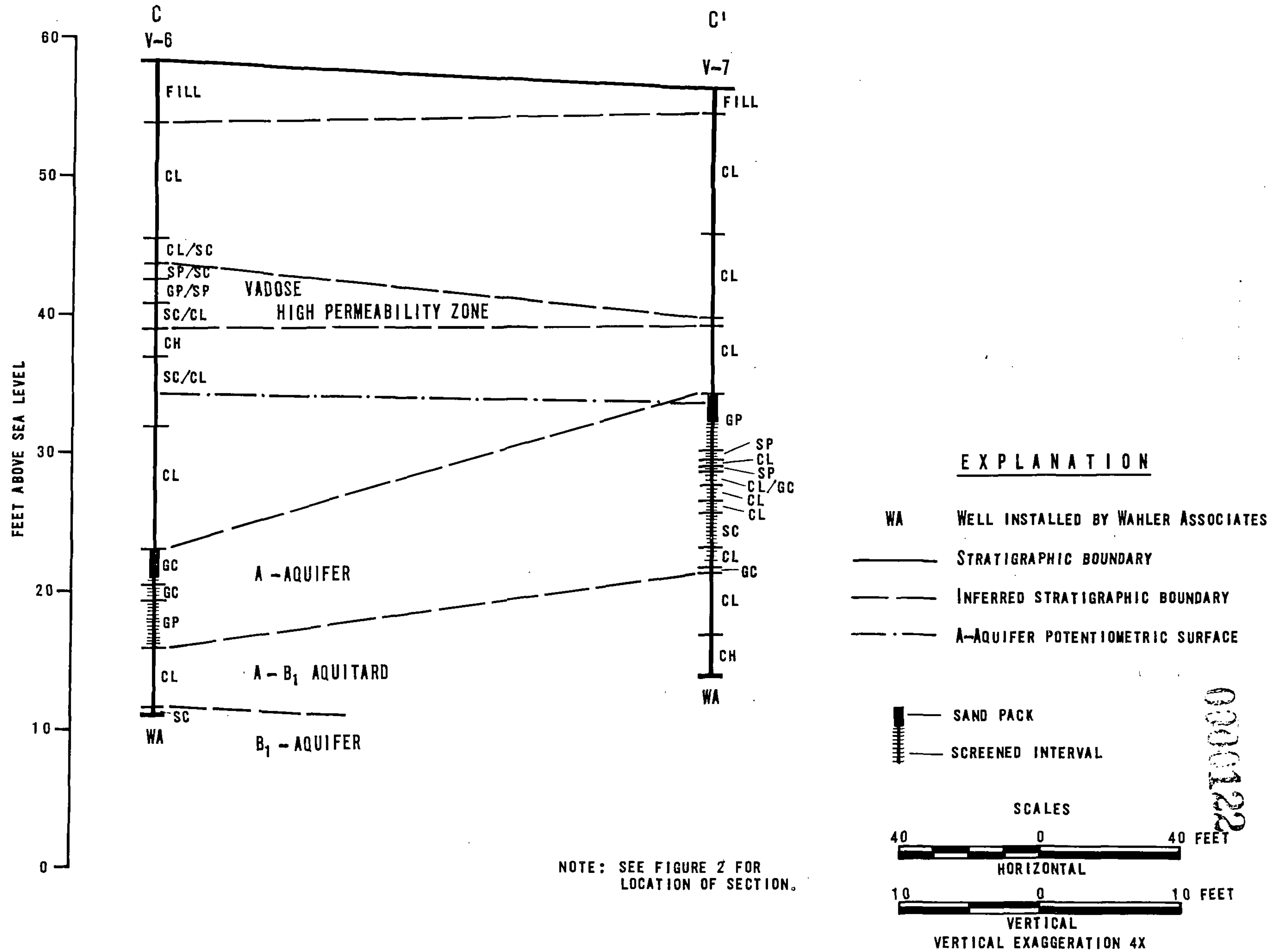
GEOLOGIC CROSS SECTION B-B'

PROJECT NO. JCO-104H

DATE OCTOBER 1987

FIGURE NO. 7

000122



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PALO ALTO • CALIFORNIA

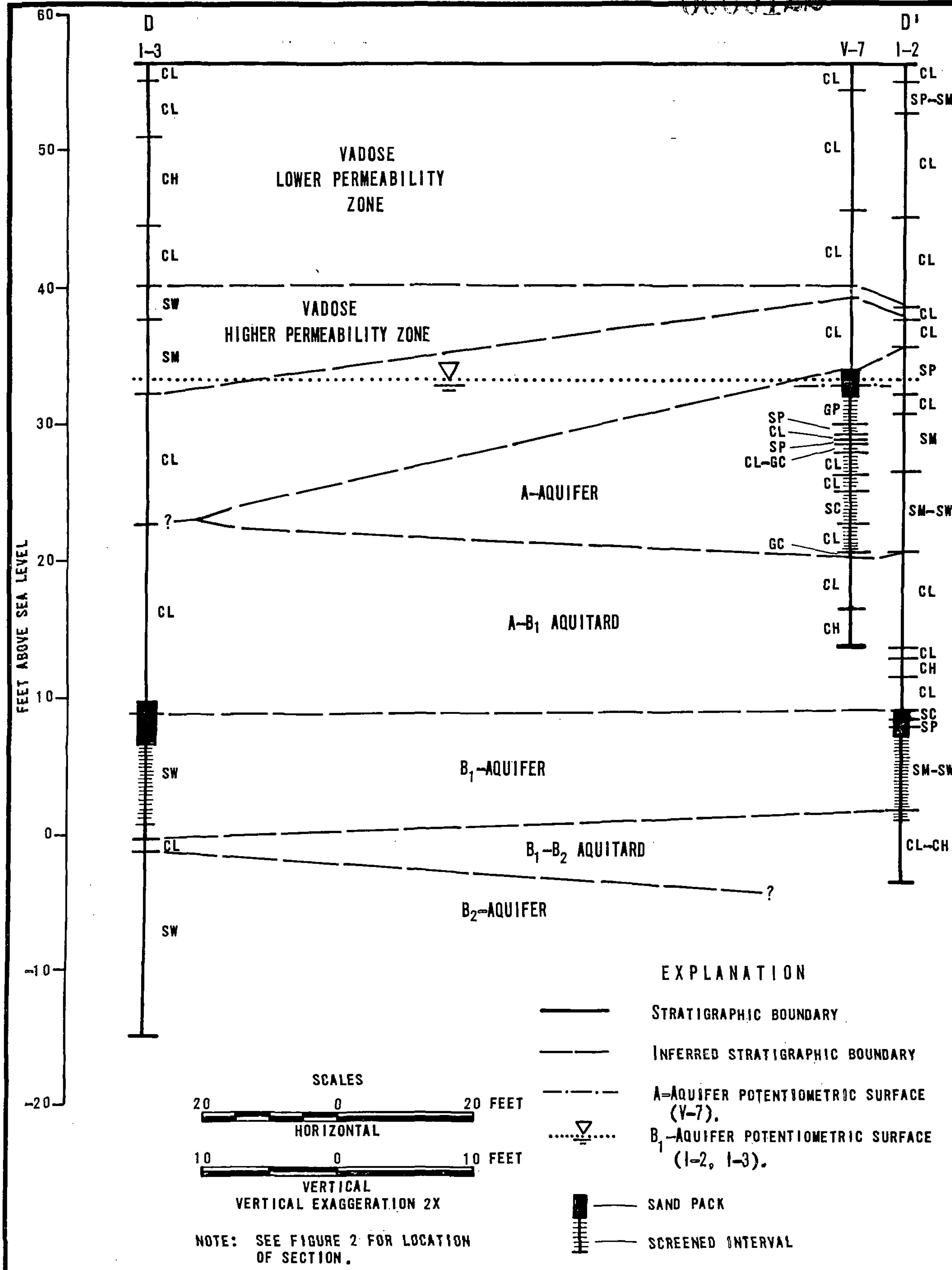
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION

GEOLOGIC CROSS SECTION C-C'

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	8

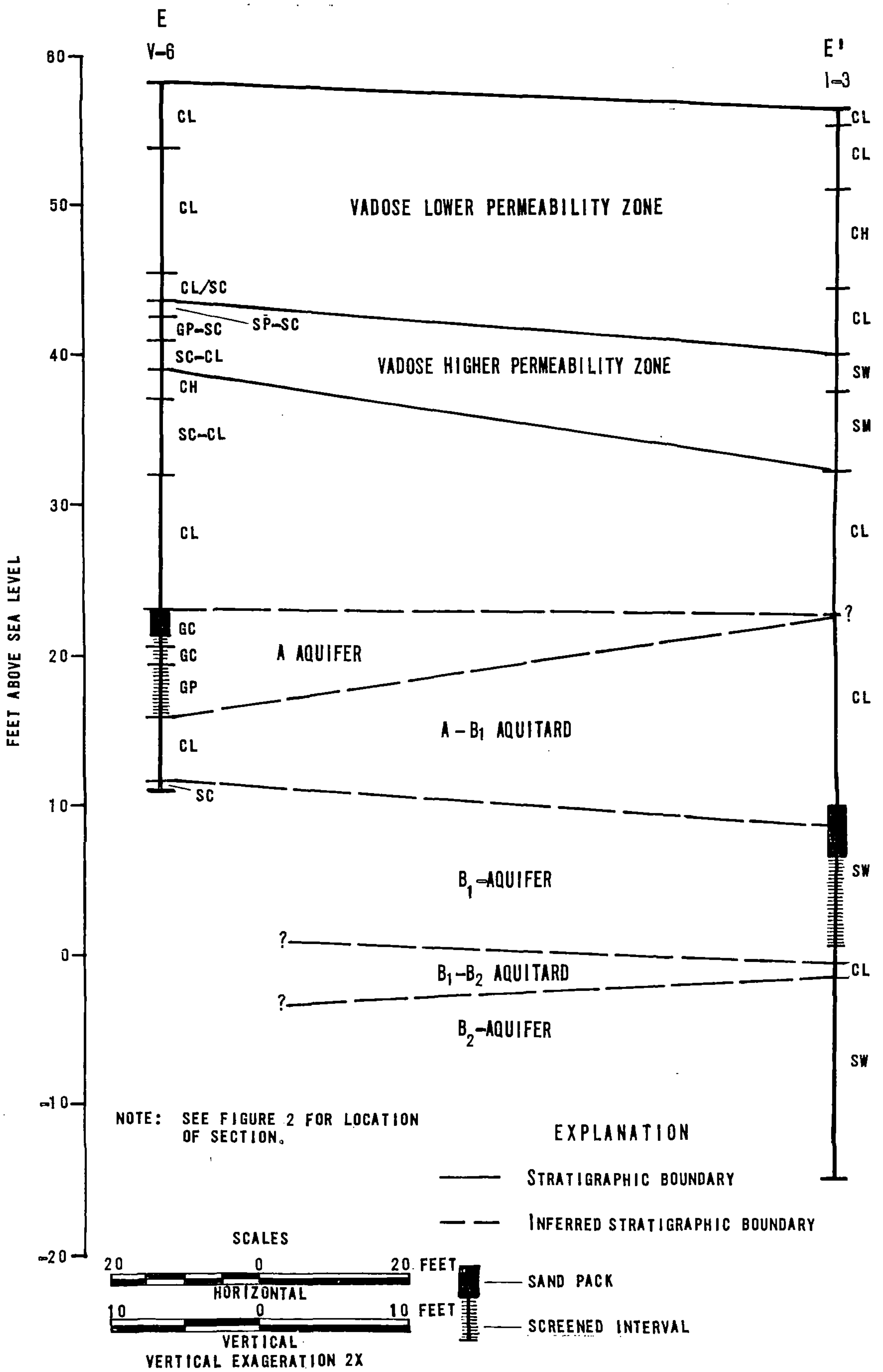
000122

0000122

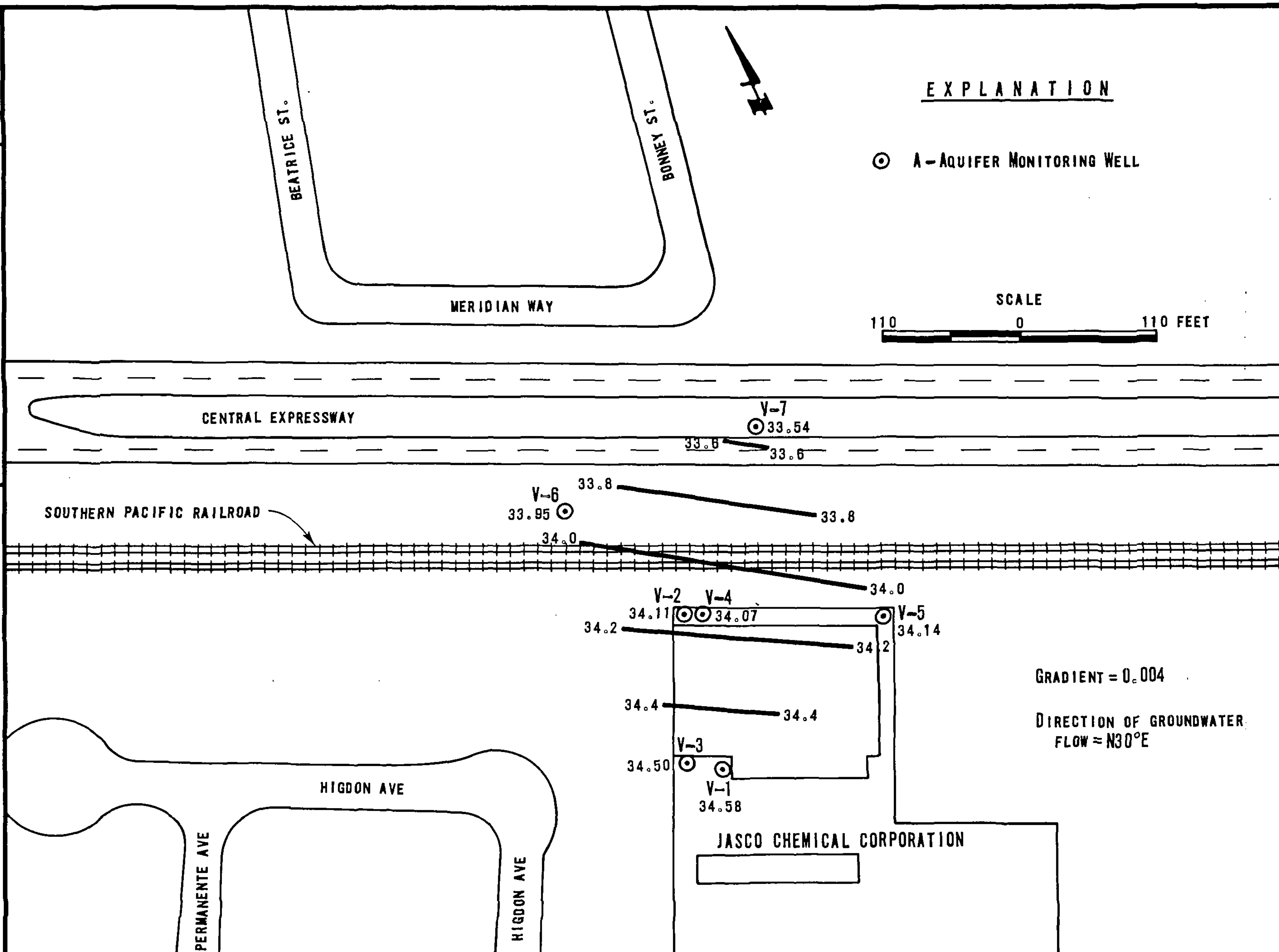


Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION PALO ALTO • CALIFORNIA	GEOLOGIC CROSS SECTION D-D'		
		PROJECT NO.	DATE	FIGURE NO.
		JCO-104H	OCTOBER 1987	9

0000122



Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION PALO ALTO • CALIFORNIA	GEOLOGIC CROSS SECTION E-E'		
		PROJECT NO.	DATE	FIGURE NO.
		JCO-104H	OCTOBER 1987	10



Wahler Associates

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PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

POTENTIOMETRIC SURFACE A-AQUIFER
OCTOBER 7, 1987

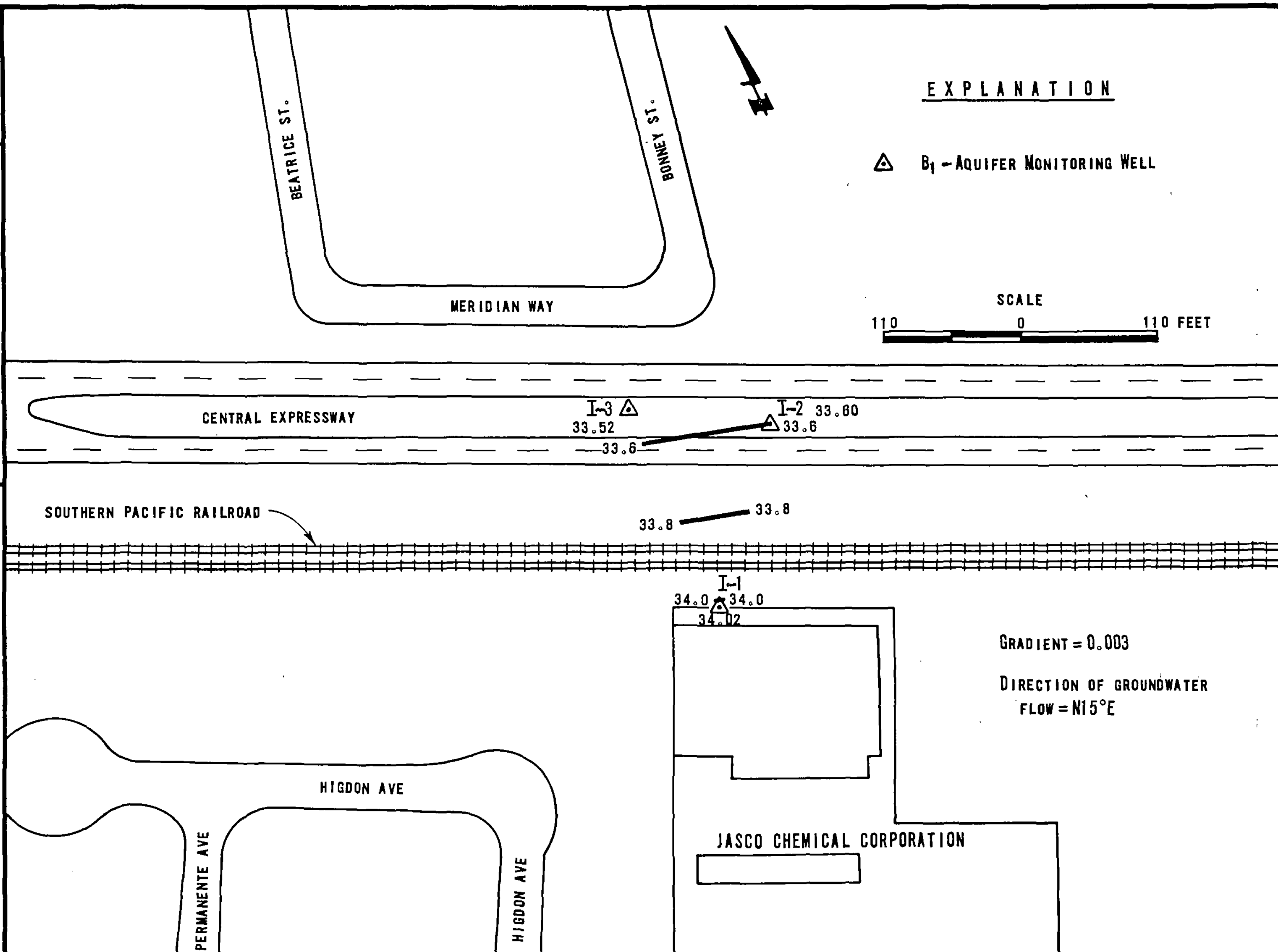
PROJECT NO. JCO-104H
DATE OCTOBER 1987
FIGURE NO. 11

Wahler Associates

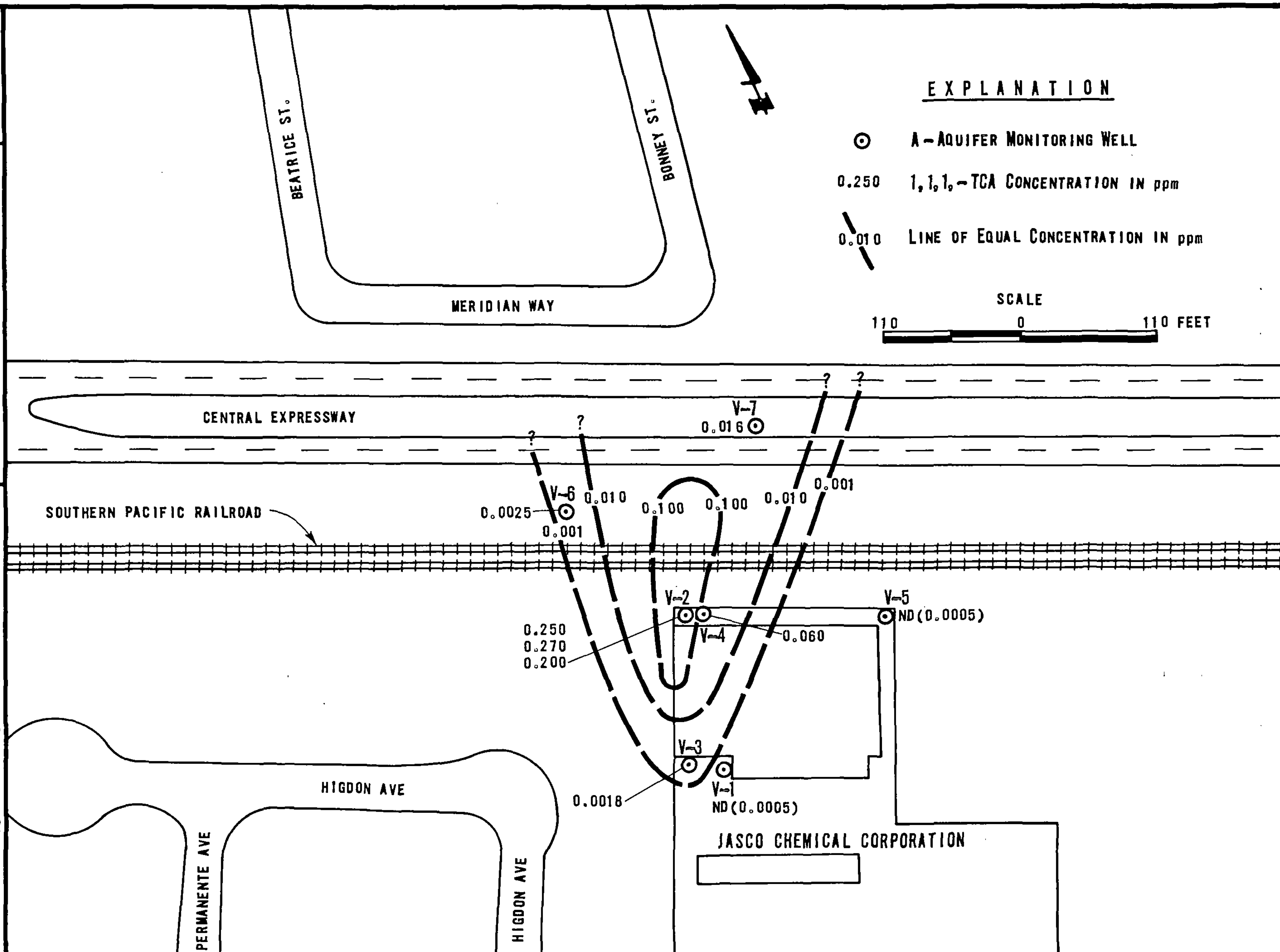
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

POTENTIOMETRIC SURFACE - B_1 AQUIFER
OCTOBER 7, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	12



0001122



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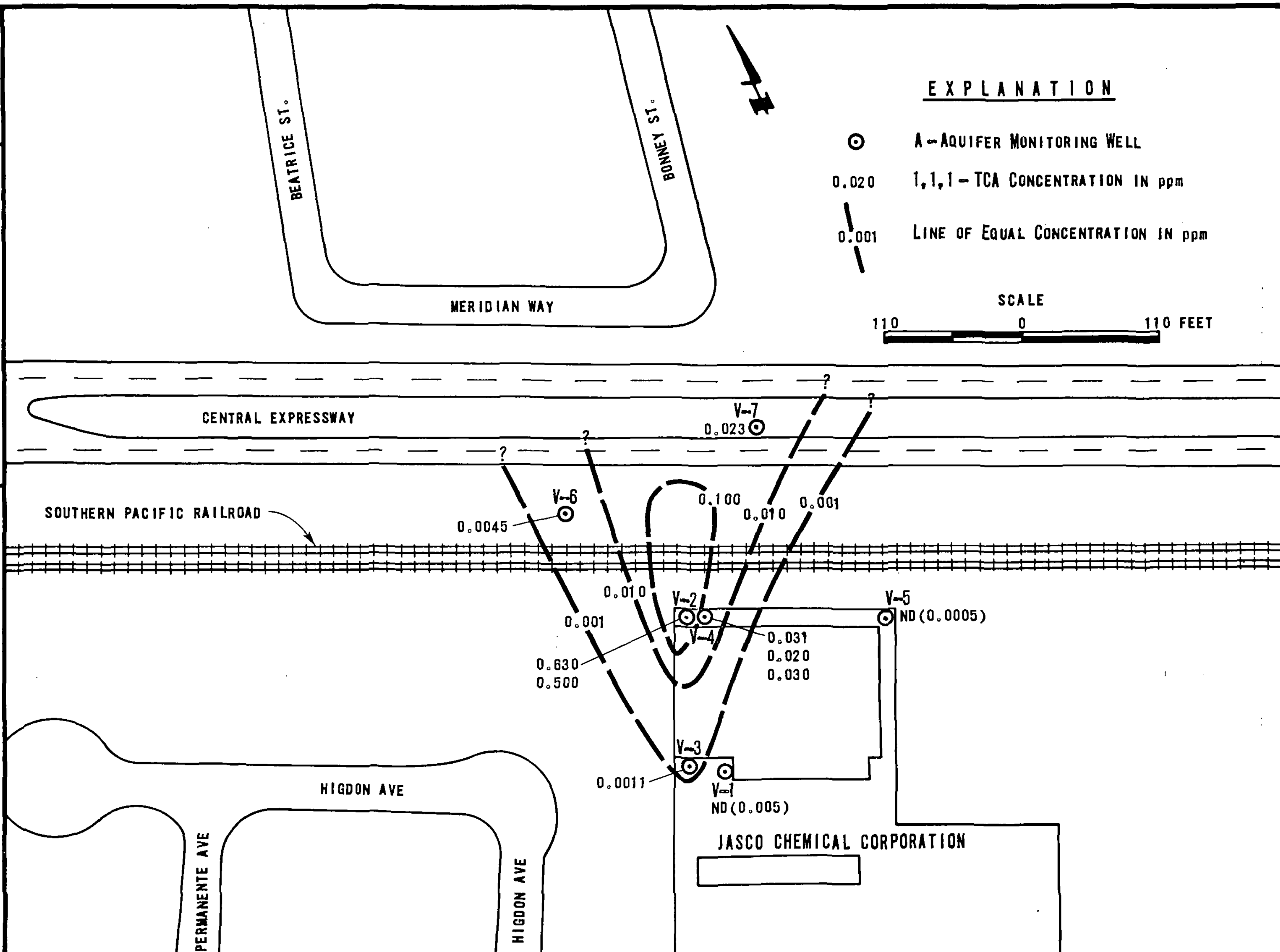
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION

DISTRIBUTION OF 1,1,1-TCA IN
A-AQUIFER MONITORING WELLS - AUGUST 28, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	13

000122



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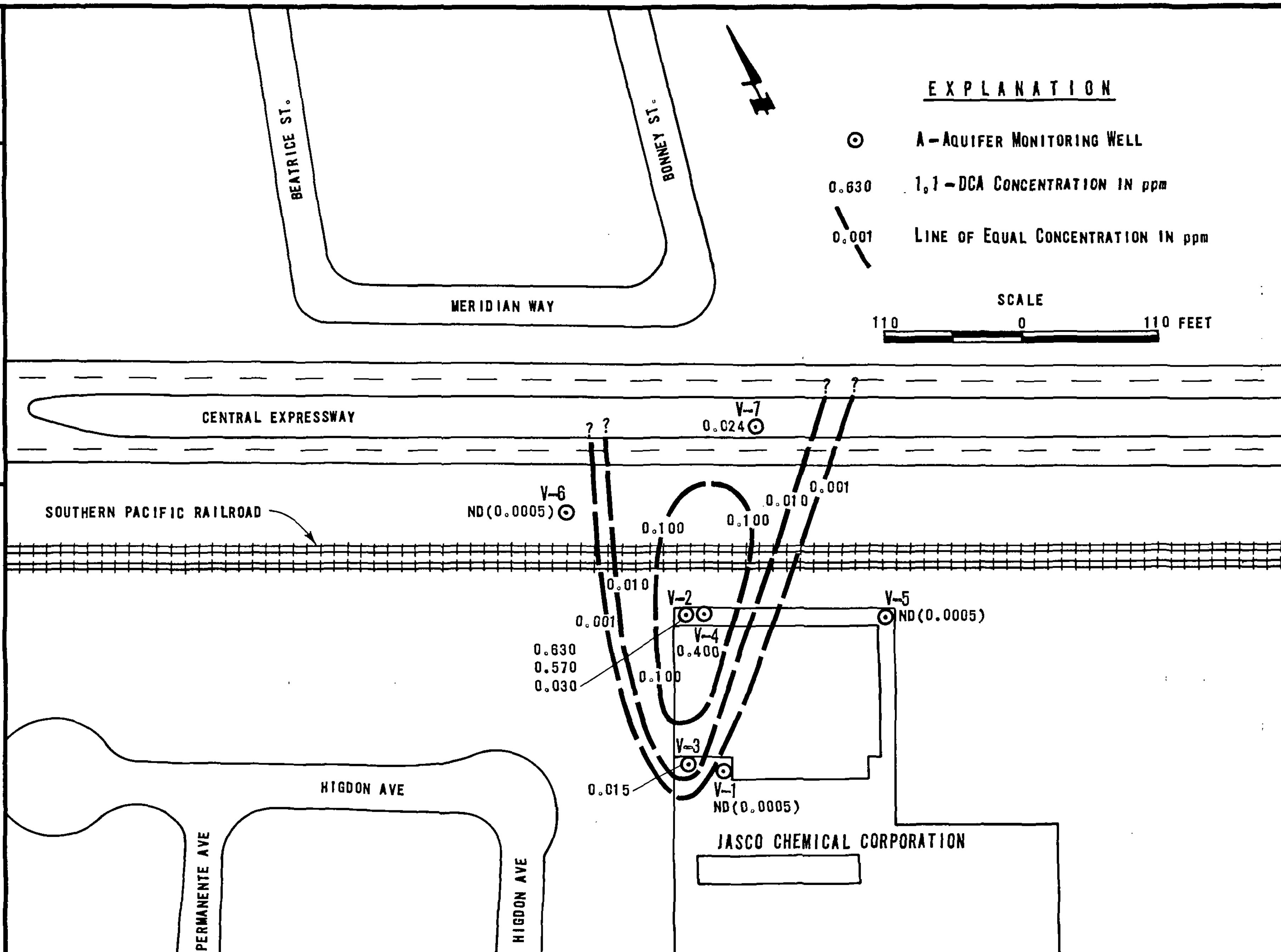
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION

PALO ALTO • CALIFORNIA

DISTRIBUTION OF 1,1,1-TCA IN
A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	14



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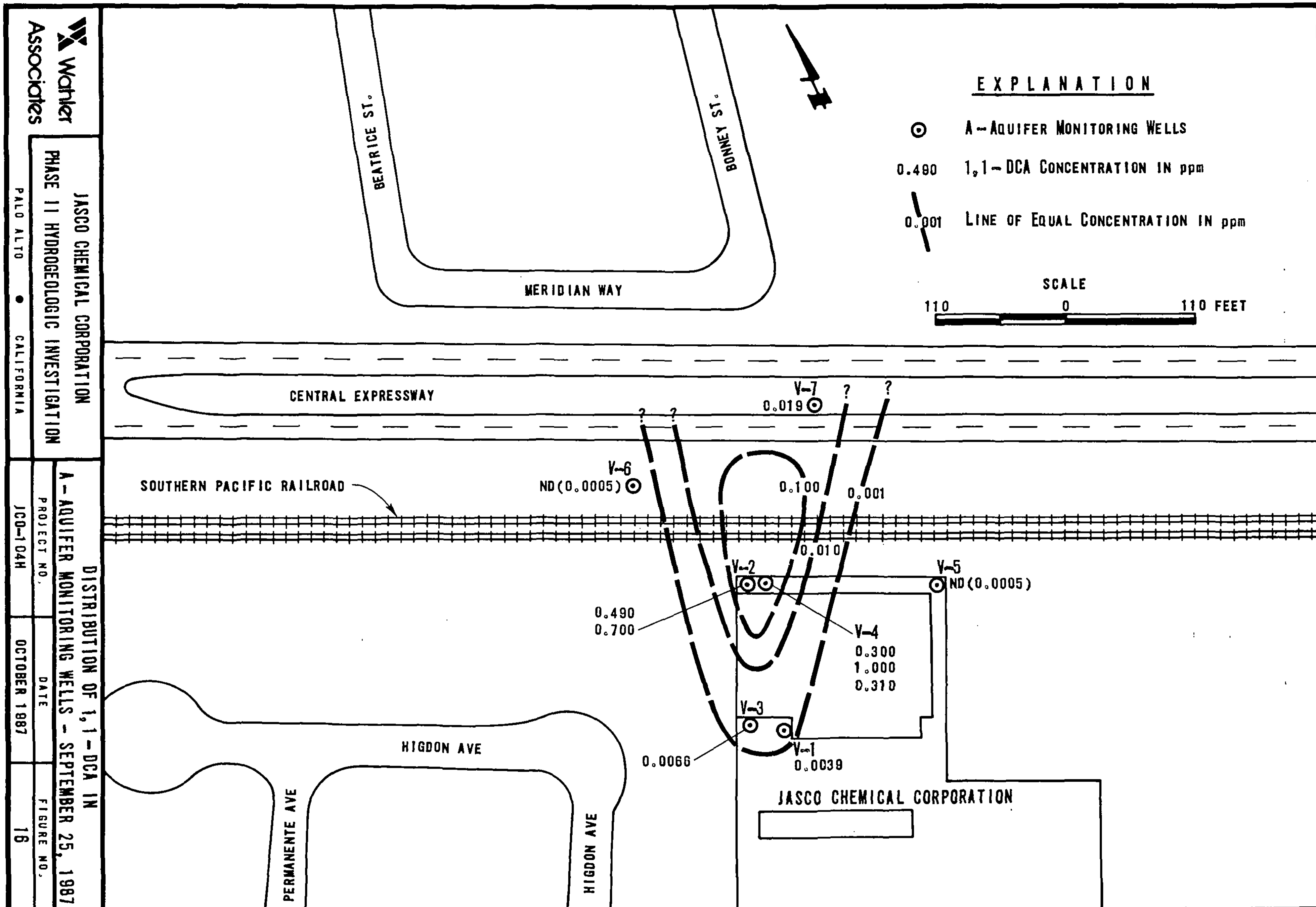
PHASE II HYDROGEOLOGIC INVESTIGATION

PALO ALTO • CALIFORNIA

DISTRIBUTION OF 1,1-DCA IN A-AQUIFER MONITORING WELLS - AUGUST 28, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	15

0000122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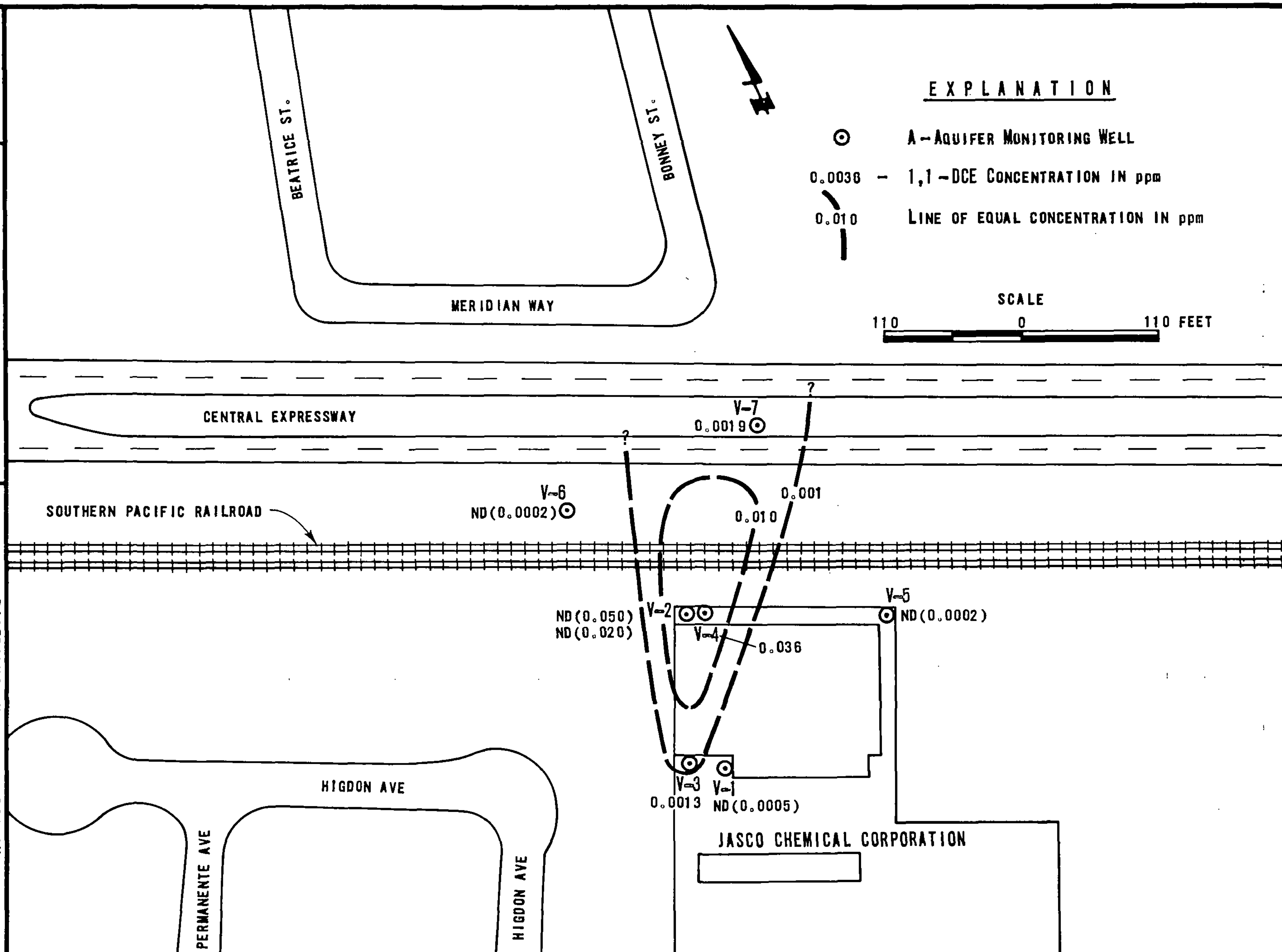
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA
DISTRIBUTION OF 1,1-DCA IN
A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987
PROJECT NO.
JCO-104H
DATE
OCTOBER 1987
FIGURE NO.
16
EXPLANATION
A-AQUIFER MONITORING WELLS
0.490 1,1-DCA CONCENTRATION IN ppm
0.001 LINE OF EQUAL CONCENTRATION IN ppm
SCALE
110 0 110 FEET
BEATRICE ST.
BONNEY ST.
MERIDIAN WAY
CENTRAL EXPRESSWAY
SOUTHERN PACIFIC RAILROAD
V-7
0.019
V-6
ND(0.0005)
0.100
0.001
0.010
V-2
V-5
ND(0.0005)
0.490
0.700
V-4
0.300
1.000
0.310
V-3
0.0066
V-1
0.0039
JASCO CHEMICAL CORPORATION
HIGDON AVE
PERMANENTE AVE
HIGDON AVE

0001122



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PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

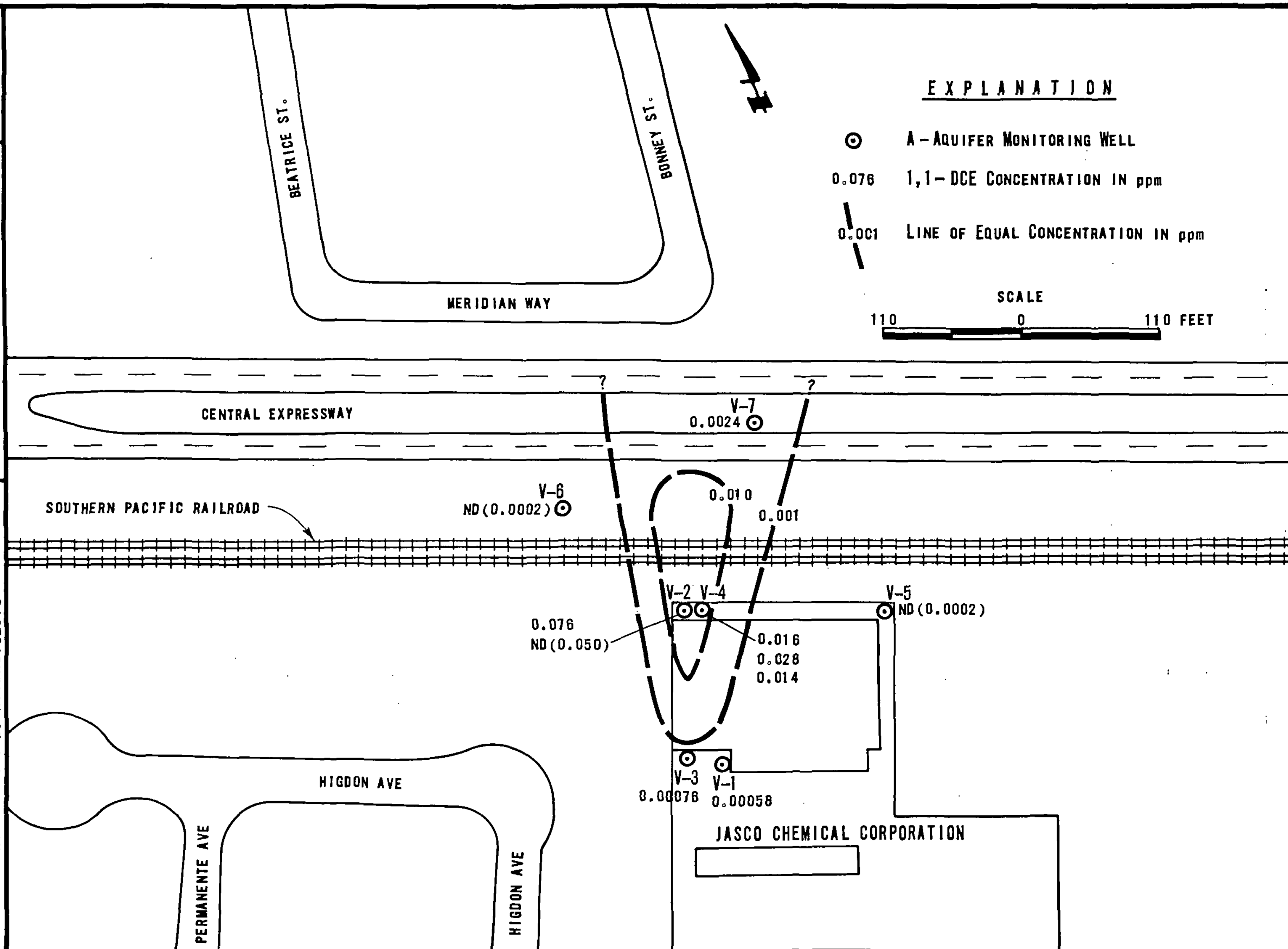
DISTRIBUTION OF 1,1-DCE IN A-AQUIFER MONITORING WELLS - AUGUST 28, 1987

PROJECT NO. JCO-104H

DATE OCTOBER 1987

FIGURE NO. 17

0000122



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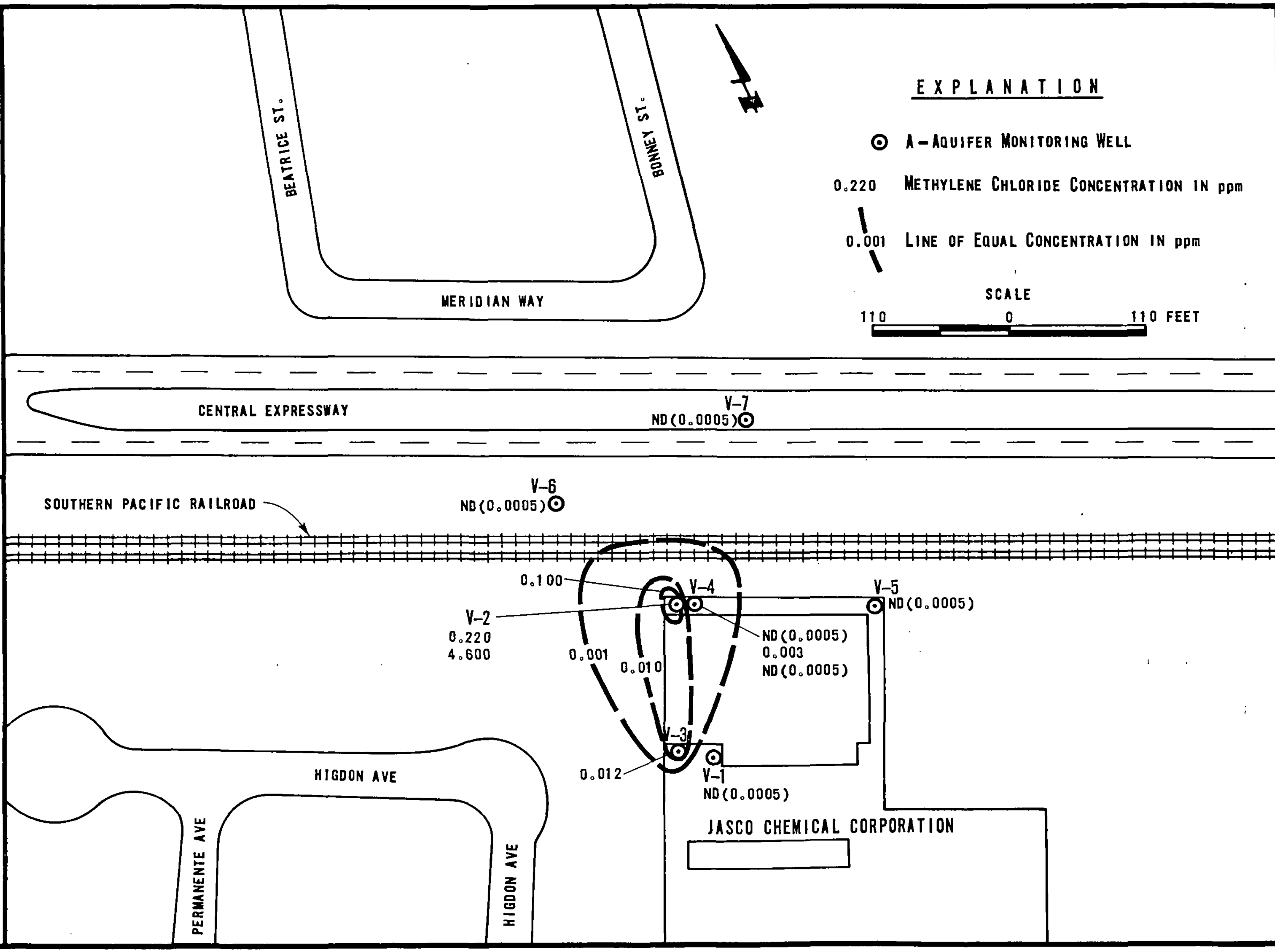
PALO ALTO • CALIFORNIA

DISTRIBUTION OF 1,1-DCE IN A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	18



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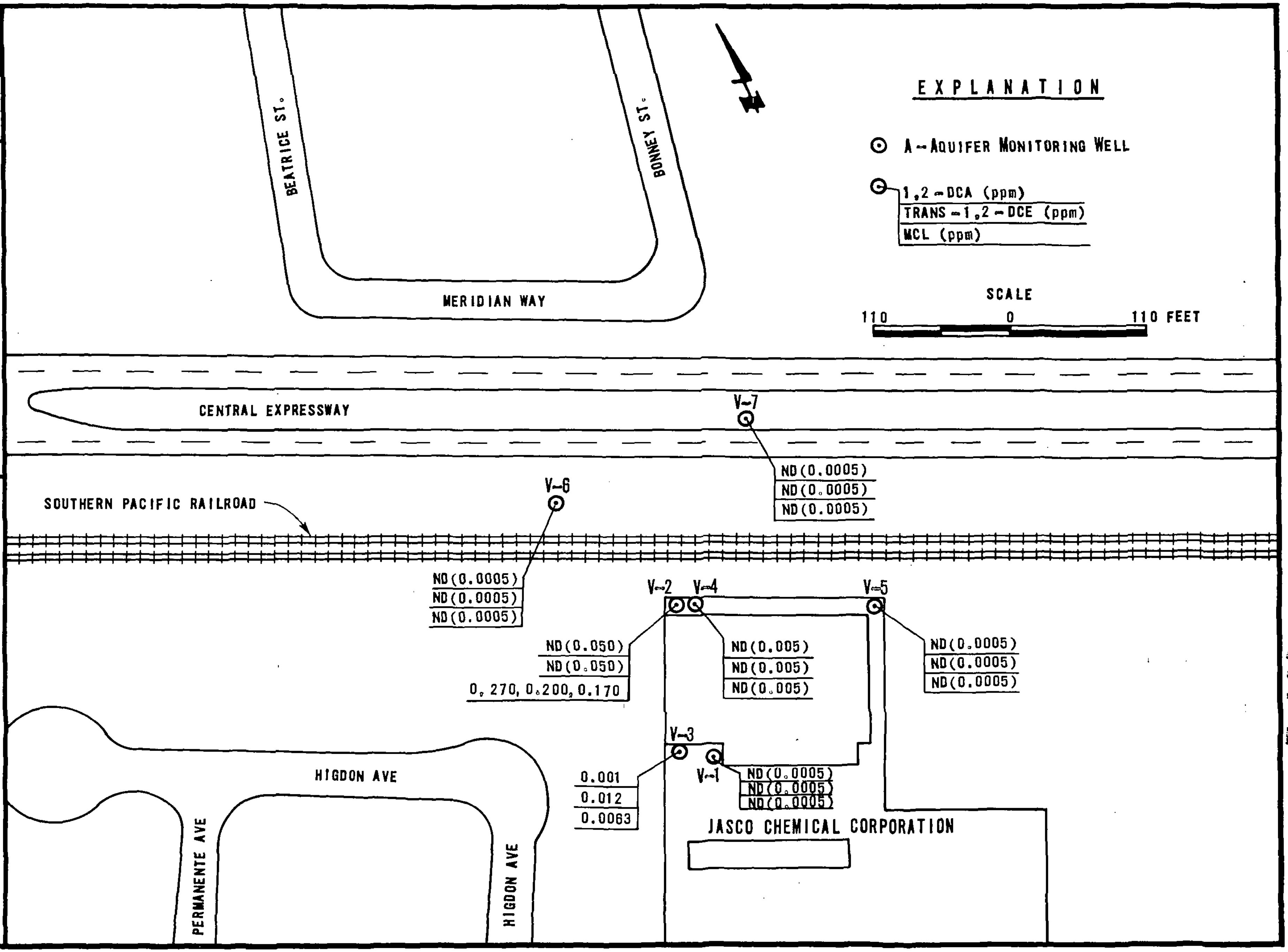
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

DISTRIBUTION OF METHYLENE CHLORIDE IN
A – AQUIFER MONITORING WELLS – SEPTEMBER 25, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	19

00001222



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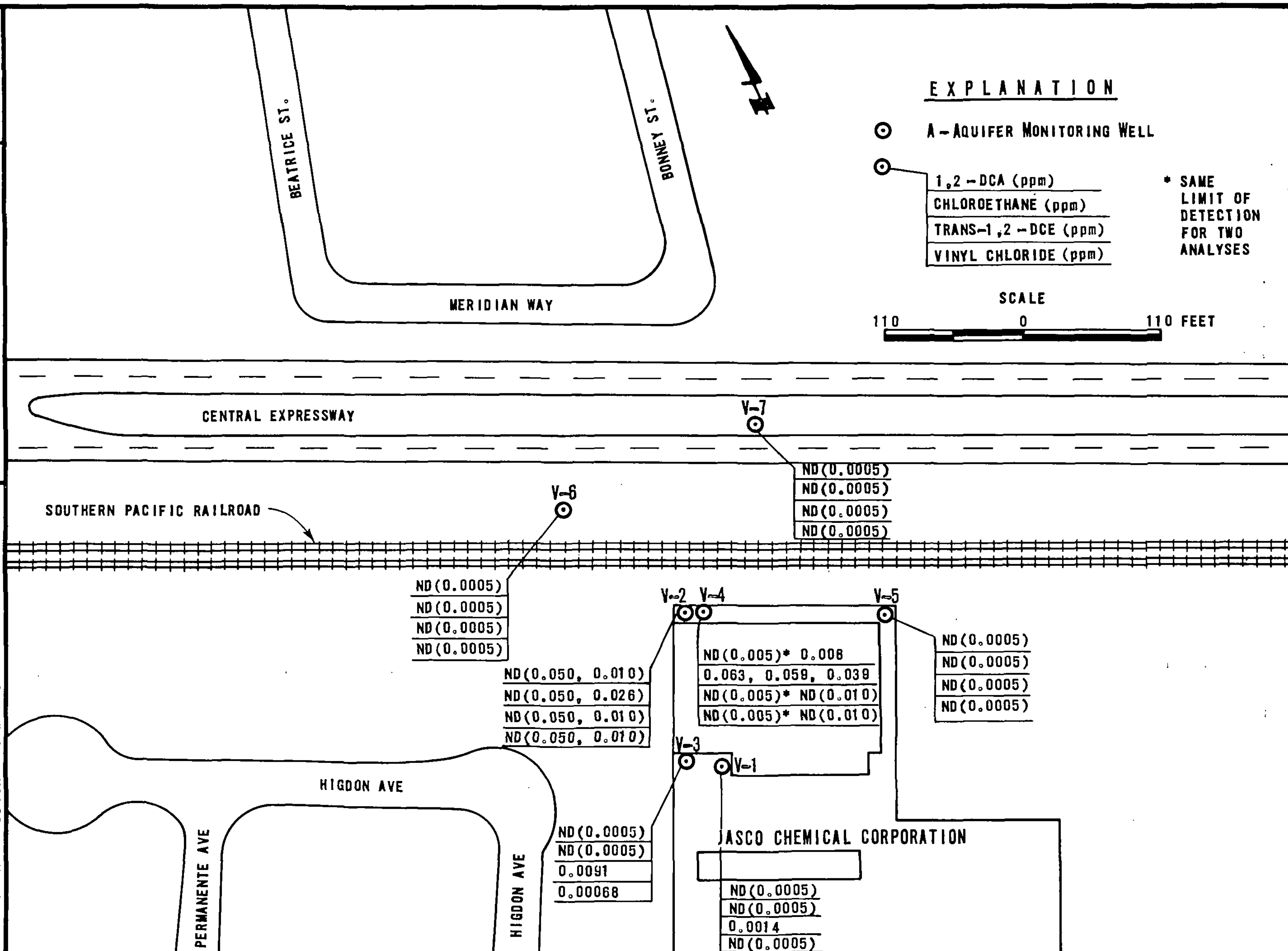
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

CONCENTRATION OF 1,2-DCA, TRANS-1,2-DCE AND MCL IN A-AQUIFER MONITORING WELLS - 8-28-87

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	20

0000122



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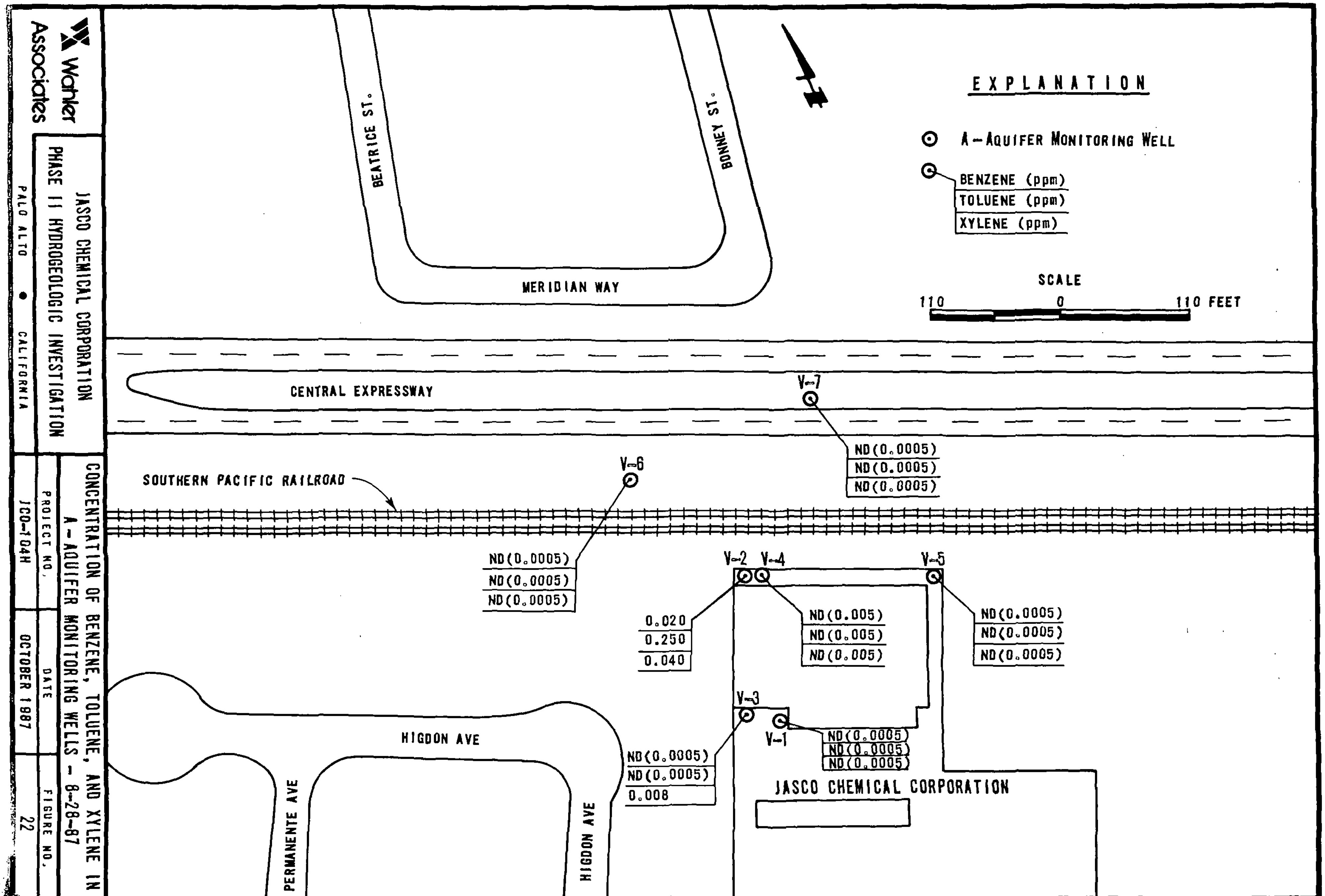
PALO ALTO • CALIFORNIA

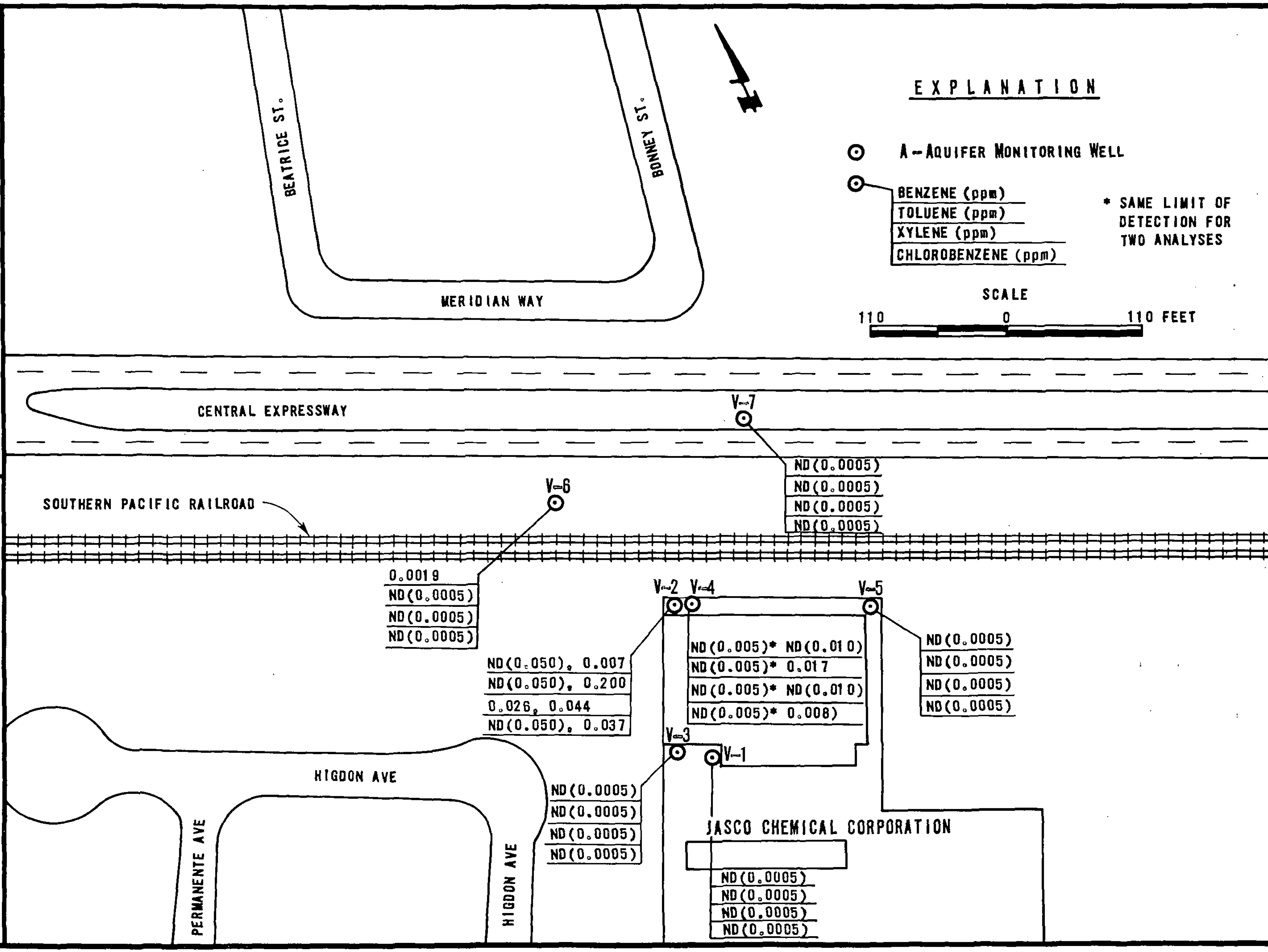
DISTRIBUTION OF PURGEABLE HALOCARBONS IN A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	21

0000122


Wahler Associates
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA
CONCENTRATION OF BENZENE, TOLUENE, AND XYLENE IN
A - AQUIFER MONITORING WELLS - 8-28-87
PROJECT NO.
JCO-104H
DATE
OCTOBER 1987
FIGURE NO.
22
EXPLANATION
A - AQUIFER MONITORING WELL
BENZENE (ppm)
TOLUENE (ppm)
XYLENE (ppm)
SCALE
110
0
110 FEET
BEATRICE ST.
BONNEY ST.
MERIDIAN WAY
CENTRAL EXPRESSWAY
SOUTHERN PACIFIC RAILROAD
V-7
ND(0.0005)
ND(0.0005)
ND(0.0005)
V-6
ND(0.0005)
ND(0.0005)
ND(0.0005)
V-2
0.020
0.250
0.040
V-4
ND(0.005)
ND(0.005)
ND(0.005)
V-5
ND(0.0005)
ND(0.0005)
ND(0.0005)
V-3
ND(0.0005)
ND(0.0005)
0.008
V-1
ND(0.0005)
ND(0.0005)
ND(0.0005)
JASCO CHEMICAL CORPORATION
HIGDON AVE
PERMANENTE AVE
HIGDON AVE

00001722



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PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

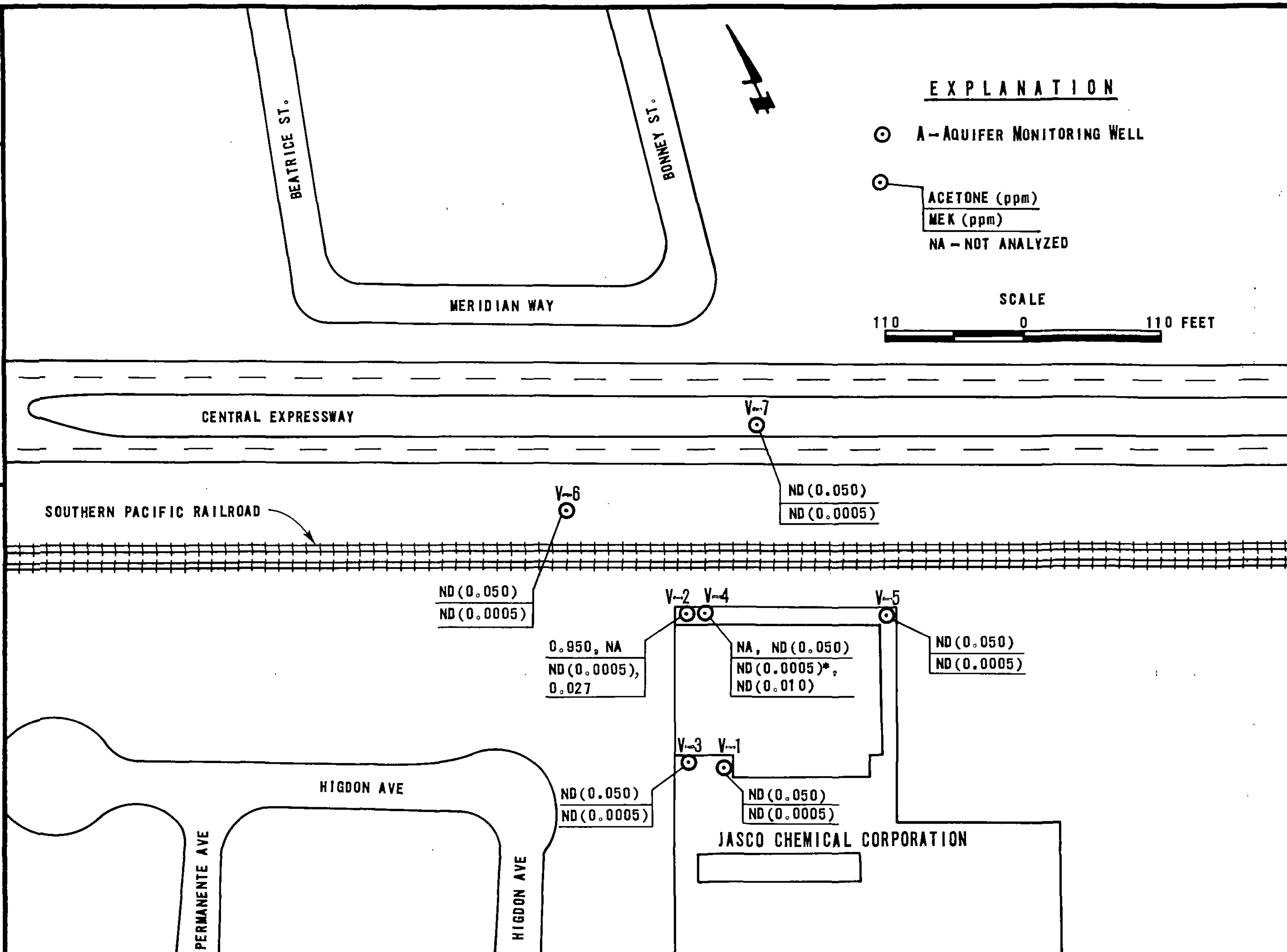
DISTRIBUTION OF PURGEABLE AROMATICS IN A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987

PROJECT NO. JCO-104H

DATE OCTOBER 1987

FIGURE NO. 23

0001222



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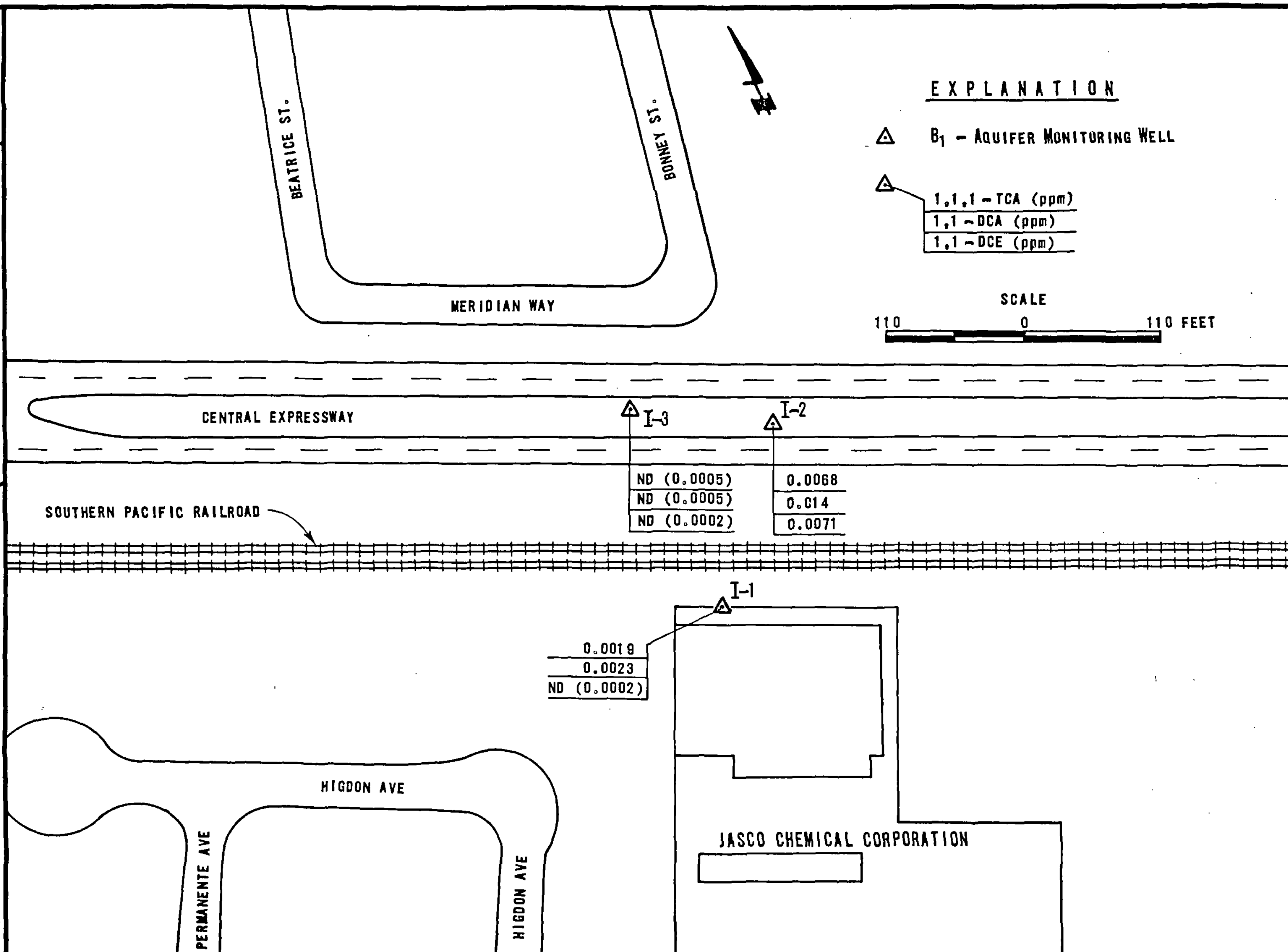
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

DISTRIBUTION OF ACETONE AND MEK IN
A-AQUIFER MONITORING WELLS - SEPTEMBER 25, 1987

PROJECT NO. JCO-104H
DATE OCTOBER 1987
FIGURE NO. 24

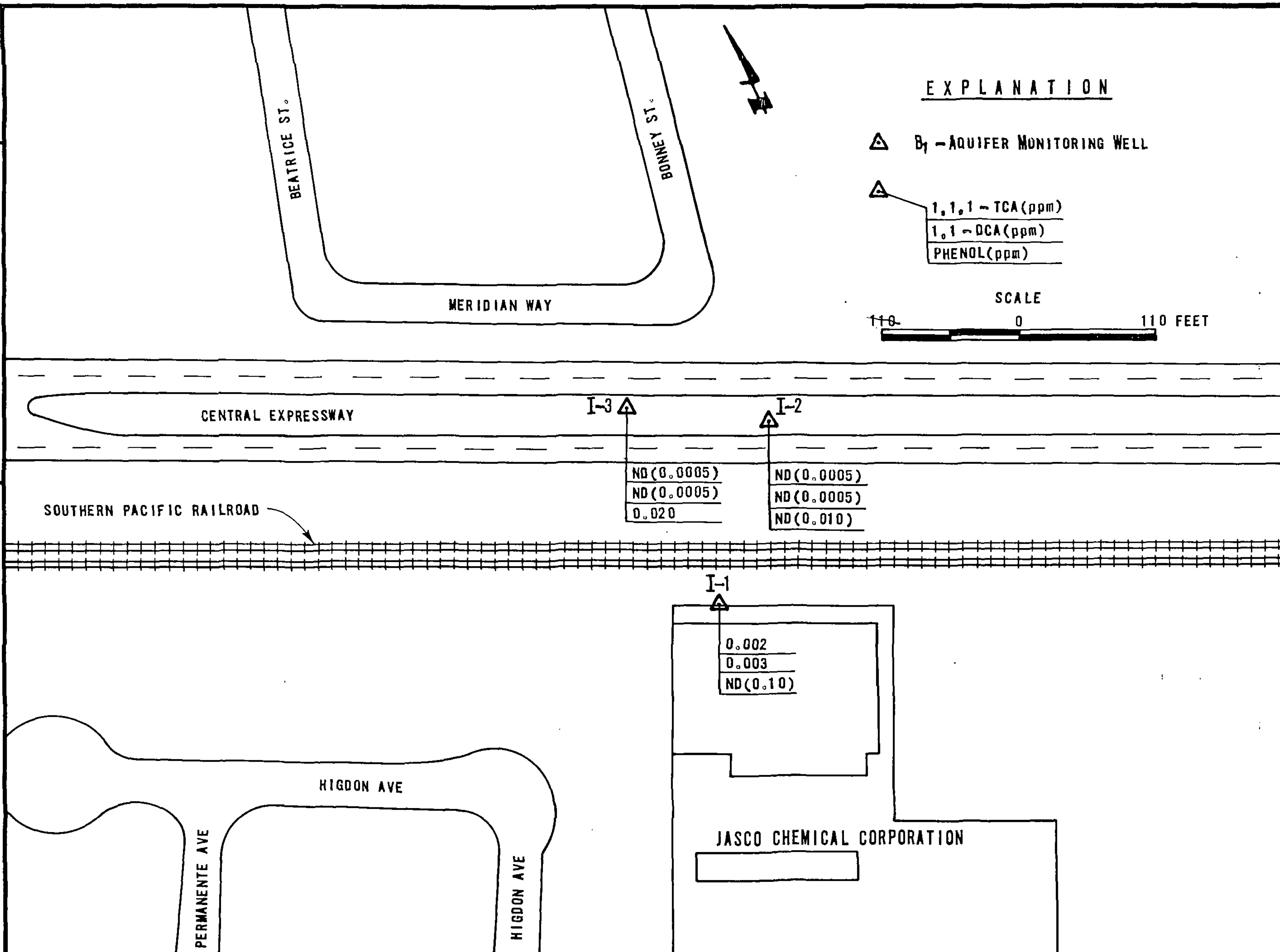


Wahler Associates

JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

DISTRIBUTION OF PURGEABLE HALOCARBONS IN B_1 AQUIFER WELLS - AUGUST 28, 1987

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	25



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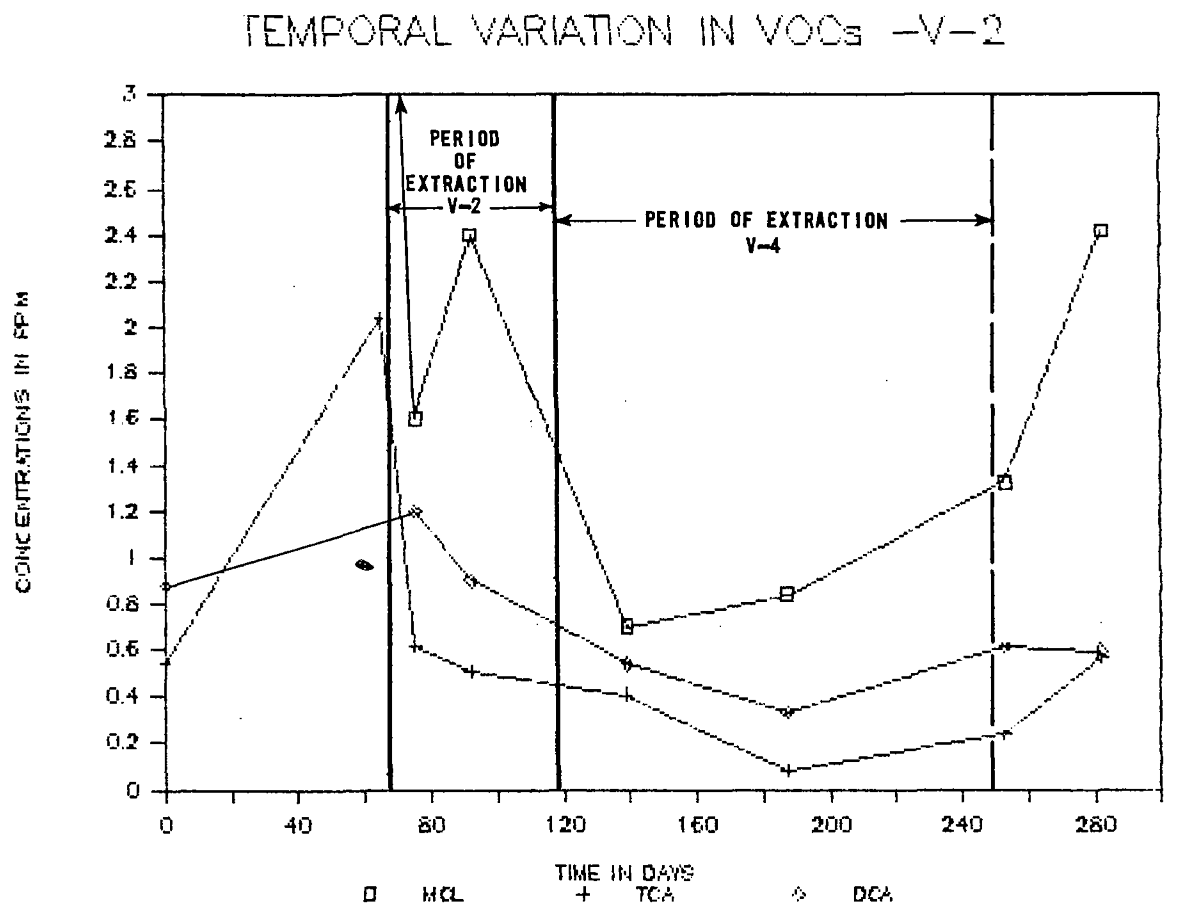
JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

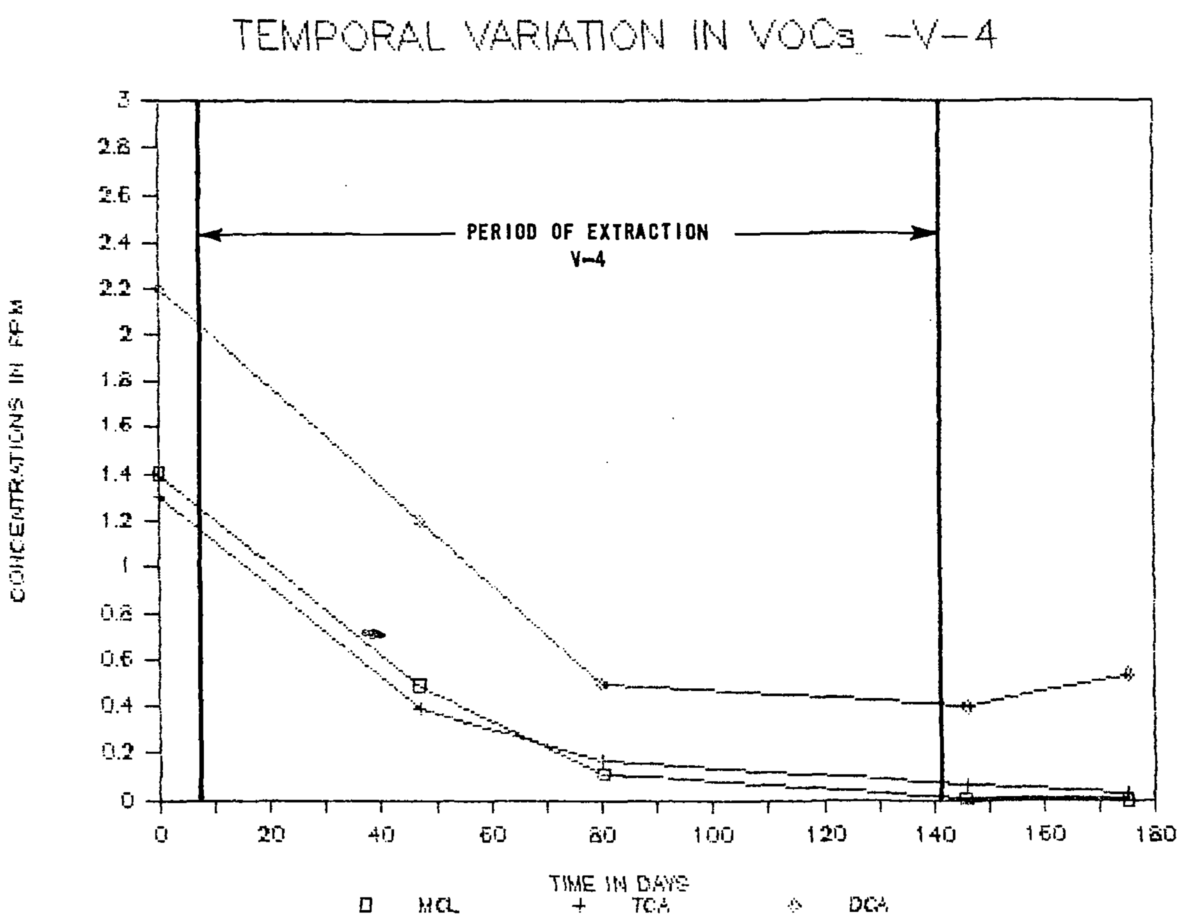
CONCENTRATION OF 1,1,1-TCA, 1,1-DCA AND PHENOL IN B_1-AQUIFER MONITORING WELLS - 9-25-87

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	26

0000122



Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION	TEMPORAL VARIATION IN CHEMICAL CONCENTRATION A - AQUIFER WELL V-2		
		PROJECT NO.	DATE	FIGURE NO.
	PALO ALTO ● CALIFORNIA	JCO-104H	OCTOBER 1987	27



Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION	TEMPORAL VARIATION IN CHEMICAL CONCENTRATION A-AQUIFER WELL V-4	
	PALO ALTO ● CALIFORNIA	PROJECT NO. JCO-104H	DATE OCTOBER 1987 / FIGURE NO. 28

APPENDIX A

BORING LOCATION JASCO CHEMICAL CORP. (In median of Central Exp.				GROUND EL.
DEPTH/ELEV. WATER 23.5' (8-11-87)	DRILL CONTRACTOR HEW Drilling			TOTAL DEPTH 48.0
DRILL RIG CME 75	BORING DIA. 8.0"	DATE DRILLED 11 AUG 87		LOGGED BY P.J.S.

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
CL	0.0-1.0' SANDY CLAY: Top soil, Blackish brown (5YR 2/1); some gravel; slight organics.	0.0				HA	Casto - Driller 9:20 Anibal - Helper Advancing hole with 8.0" hollow stem augers.
SP-SM	1.0-3.4' GRAVELLY SAND: Dk. yel. brn. (10YR 4/2); ~10% fines, non plastic; ~60% sand, fine-to coarse-grained, mod. grading, angular; ~30% fine gravel, angular; med. dense to dense; damp. (probable road base)	2.0	T-1		1.6 / 3.0		Sampling with a 3.0" continuous core sampler, lined with clear plastic tubes (3.0" x 2.5') (samples termed T-1, T-2, etc.). 0.0-3.0 Run #1
CL	3.4-11.0' SANDY CLAY: Olive Blk. (5Y 2/1); ~90% fines, mod. to high plastic, no dilatancy, med to high toughness; ~10% sand, fine-grained, rounded; abundant caliche (heavy rxn to HCL); damp.	4.0	T-2		2.5 / 2.5		3.0-8.0 Run #2
		6.0	T-3		2.5 / 2.5		~7.0' slight auger grinding.
	~6.0-7.5 slight brn color	8.0	T-4		2.5 / 2.5		9:51 — 8.0' 8.0-13.0 Run #3
CL	11.0-20.6' SANDY CLAY: Lt. olive gray (5Y 5/2); ~70-80% fines, med. plastic, slight dilatancy, slight to med toughness; ~20-30% sand, fine-to coarse-grained (mostly fine with rounded coarse); sub angular to rounded; some Fe staining and coatings; no cement; no odor; damp.	10.0 / 12.0	T-5		2.5 / 2.5		
		14.0	T-6		2.5 / 2.5		10:04 — 13.0' 13.0-18.0 Run #4
	15.8-17.2' more clayey, less sand.	16.0	T-7		2.5 / 2.5		
CL	17.8-18.7' gravelly clay	18.0	T-8		1.0 / 1.0		— 18.0 10:30 18.0-21.5 Run #5
CL		20.0	T-9		2.5 / 2.5		Ernest Solomon CEG #350

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO. JCO 104H	SHEET NO. 1 OF 3	I-2

BORING LOCATION			GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR		TOTAL DEPTH
DRILL RIG	BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
CL	11.0 - 20.6' SANDY CLAY: (cont.)	20.0	T-9 (cont.)		2.5/2.5	HA	
SP	20.6 - 24.2 GRAVELLY SAND: Dusky yel. brn (10YR 2/2); ~5% Fines; ~75% sand, fine-to coarse-grained, poorly to mod. grading (lenses of very poorly graded); sub rounded; Fe staining; ~~saturated~~.						~21.0 augers grinding 21.5 - 23.0 Run # 6
		22.0	T-10		1.5/1.5		22.5 ground water while drilling 23.0 - 28.0 Run # 7 23.5 standing H_2O when augers removed
		24.0	T-11		2.5/2.5		
CL	24.2 - 25.5 clay lens						
SM	25.5 - 29.5 SILTY SAND: Dusky yel. brn. (10YR 2/2); ~30% Fines, non plastic; ~70% sand, fine-grained, poorly graded; (occational rounded gravel); no odor; ~~saturated~~. - some thin (~0.1-0.05) lenses of clay.						25.5
		26.0	No sample		0.0/2.5		sampler blocked off at 25.5 and assumed sandy from 25.5 - 28.0' but not recovered.
		28.0	T-12		2.5/2.5		11:00 28.0 11:10 28.0 - 33.0 Run # 8
SM-SW	29.5 - 35.3 SILTY SAND/ GRAVELLY SILTY SAND: Dusky yel. brn (10YR 2/2); ~20% Fines, non plastic; ~60-80% sand, fine-to coarse-grained, mod grading, sub rounded, sub angular; ~0-20% gravel; abundand Fe staining and coatings wet, (Gravel is contined to lenses)	30.0					25.5 - Drilling very soft
		32.0	T-13		2.5/2.5		33.0 11:27 33.0 - 38.0 Run # 9
		34.0	T-14		2.5/2.5		
CL	35.3 - 42.5 SANDY CLAY: Dk. greenish gray (5G 4/1); ~60-80% Fines, med. plastic (some zones of high plastic), slow dilatancy, med. toughness; ~20-40% sand, fine-to medium-grained (some angular coarse frags); no cement; low perviousness; ~~wet~~. 35.7 - 37.2 zone of gradation from above material	36.0	T-15		2.5/2.5		11:31 38.0 38.0 - 43.0 Run # 10
		38.0	T-16		2.5/2.5		
		40.0					

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG	BORING NO.
		PROJECT NO. JCO 104H; SHEET NO. 2 OF 3	I-2

BORING LOCATION		GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR	TOTAL DEPTH
DRILL RIG / BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
CL	35.3 - 42.5 SANDY CLAY: (cont.) 38.0 - 39.5 more sandy; 38.0 - 38.5 sand lens; 40.9 - 42.5' ~95% clay	40.0	T-16 (cont.)		2.5/2.5	HA	
		42.0	T-17		2.5/2.5		
CL / CH / CL	42.5 - 47.0' SANDY CLAY: Dk. yel. brn. (10YR 4/2); ~80-90% fines, med to high plastic, slow dilantancy to none, med. to higher toughness; ~10-20% fine- to medium-grained sand (occasional coarse), poorly graded, rounded; Fe coatings + stains; no odor; slight rxn. to HCL; low to non pervious; stiff; wet. 43.0 - 43.3' possible sluff. 43.3 - 44.7' clay, very slight sand. 44.7 - 47.0 sandy clay with slight gravel	44.0	T-18		2.5/2.5		11:55 43.0 1:00 43.0-48.0 Run #11. 0.0 - 46.0 cutting coming up clean (no slop)
		46.0	T-19		2.5/2.5		~46.0' water coming up with cuttings. (slop)
SC / SP	47.0 - 48.0' CLAYEY SAND: Dk yel. brn with red staining; as above with ~60% sand and 40% fines; 47.7 - 48.0 sand with no fines.	48.0					48.0' Terminated drilling.

Bottom Hole 48.0'

Following termination, Tremie grout To boring, filled hole with grout to surface.

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BORING LOCATION JASCO CHEMICAL CORP. / In Central Expressway Median | GROUND EL.

DEPTH/~~ELEV~~. WATER 23.67 / 0.95 stick-up | DRILL CONTRACTOR WEEKS DRILLING | TOTAL DEPTH 59.5

DRILL RIG FAILING 1500 | BORING DIA. ~14.0" | DATE DRILLED 14 AUG. '87 | LOGGED BY P.F.L

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
	0.0 - ~2.5' GRAVELLY CLAY	0.0				RD	Arrived on site 7:00 set-up rig & equip. Begin Drilling 9:30 Doug - Driller Richard - Helper Jim - Helper Drilling with mud rotary, 13½" tri-cone bit.
			B-3				
		2.0					
Cl	~2.5 - 11.0 SANDY CLAY: Grayish						
		4.0					Boring is 7.0" at 1700 from Well V-7.
		6.0					
		8.0					8.0' 10:00 AM
		10.0					
		12.0	B-2				
	~11.0 - 20.0 SANDY CLAY						13.0' 10:17
Cl		14.0					
			B-3				
		16.0					
		18.0					
			B-4				Ernest Solomon CEG #350
	~20.0 - 24.0 SAND	20.0					

Wahler Associates

JASCO CHEMICAL CORPORATION

EXPLORATION BORING LOG

PROJECT NO. JCO 104 H

SHEET NO. 1 OF 3

BORING NO. I-2A

BORING LOCATION			GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR		TOTAL DEPTH
DRILL RIG	BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
	20.0-24.0 SAND	20.0				RD	
SP							
		22.0	B-5				
		24.0					24.0 11:00
		26.0	B-6				
	24.0-47.0 - CLAYEY SAND						
SC		28.0	B-7				
		30.0					Drilled to 40.0'. Installed 8.0" steel casing to 40.0' and pushed to 42.0'. Installed grout pipe to 38' and pumped hole full of grout. (used 18 bags cement & ~ 200 gals H_2O) 2:40pm
		32.0	B-8				
		34.0					
		36.0	B-9				Note: Arrived Monday (17 Aug.) and casing was still full of H_2O, meaning that the seal was good.
		38.0	B-10				
		40.0					12:10

Wahler Associates

JASCO CHEMICAL CORPORATION

EXPLORATION BORING LOG

PROJECT NO.	SHEET NO.	BORING NO.
JCO 104H	2 OF 3	I-2A

BORING LOCATION		GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR	TOTAL DEPTH
DRILL RIG / BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
SC	24.0 - 47.0 - Clayey Sand (CONT.)	40.0				RD	Arrived on site ~10:3AM (17 Aug '87) Start drilling 12:25pm. Now drilling with 7½ tri-cone bit. Sampling with 3.0" split spoon sampler, line with 2.5" x 6.0" brass tubes (samples termed R-1, R-2, etc.).
		42.0	R-1	6	1.5 / 2.0	DR	Sampler is driven by a 140 lb. slide hammer, Free falling 30.0" per blow.
			R-2	10			
			R-3	19			
			R-4	33			
		44.0	R-5	8	1.8 / 2.0	DR	42.0 - 44.0 Drove sampler
			R-6	10			* R-1 - no recovery (silt) not saved
			R-7	9			
			R-8	12			
		46.0	B-1			RD	44.0 - 46.0 Driller screwed up - should not have sampled
			B-2				
SM-SW	47.0 - 54.5 SILTY GRAVELLY SAND. Dk. yel. brn (10YR 4/2); ~10% fines, nonplastic; ~60% sand, fine- to coarse-grained, mod to well graded, subrounded to subangular; ~30% gravel, fine-grained, angular; heavy Fe coatings and staining; no odor; med. to high perviousness; dense to very dense; saturated.		R-9	24	1.1 / 1.5	DR	47.0 - 48.5 Drove sampler. Note: Gravel will drilling from 46.5 - 47.0'.
		48.0	R-10	39			
			R-11	80			48.5' sampler refusal
		50.0	B-3			RD	* note: R-9 not saved
		52.0					
		54.0					
CL-CH	54.5 - 59.5 SANDY CLAY: Med. blue gray (5B 5/1); ~90% fines, highly plastic, high toughness; ~10% sand, fine- to med.-grained (mostly fine); heavy rx to HCl; non pervious; slight organics (root like brown spots); no odor; hard; damp.		R-12	20	2.0 / 2.0	DR	55.0 - 57.0 Drove sampler. * grout seal pumped 18 Aug 8:30 AM
		56.0	R-13	34			
			R-14	44			
			R-15	40			
	59.0' slight increase in sand.	58.0	B-4			RD	Terminated boring at 59.5'
	Bottom Hole 59.5						2:15 water truck left 59.5'. 4:15 Water truck return
		60.0					

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WELL CONSTRUCTION

2.0" ID PVC
0.0 - 49.0 solid
49.0 - 54.5 slotted (0.010)
Install locking well cover

SEAL

0.0 - 45.0 grout
45.0 - 47.0 Bentonite
47.0 - 54.5 Sand (#3)
54.5 - 59.5 Bentonite

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG	BORING NO.
		PROJECT NO. JCO 104H / SHEET NO. 3 OF 3	I-2A

BORING LOCATION	JASCO CHEMICAL CORP., CENTRAL EXP. MEDIAN	GROUND EL.
DEPTH/ELEV. WATER: 24.0' (standing)	DRILL CONTRACTOR: HEW Drilling	TOTAL DEPTH: 33.5
DRILL RIG: CME 75 / BORING DIA.: 8.0"	DATE DRILLED: 12 AUG. 87	LOGGED BY: P.J.S.

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
CL	0.0 - 1.0' SANDY CLAY: Brownish black; Topsoil; mod. organics; worms; wood; etc.	0.0	T-1		0.5 / 1.0	HA	Casto - Driller 8:30 Sal - Helper Boring is advanced using 8.0" hollow stem augers. Sampling is done by a CME Continous Core Sampler with 3.0"x2.5' clear plastic liners. (T)
CL	1.0 - 5.3' SANDY CLAY: Brownish black (5YR 2/1); ~85% fines, high plastic, no dilatancy, high toughness; ~15% sand, fine-to coarse-grained, poorly graded (mostly fine), rounded to subangular; abundant carbonate ppt.; slight roots; non pervious; damp.	2.0	T-2		2.5 / 2.5		
	4.2 - 4.6 zone of heavy wht. ppt.	4.0	T-3		2.3 / 2.5		0.0 - 3.5 Run # 1 3.5 - 8.5 Run # 2
CH	4.6 - 5.3 gradation zone 5.3 - 12.1' CLAY: Mod. to dark yel. brn. (10YR 5/4 & 4/2); >95% fines, high plastic, high toughness; <5% sand, fine-grained; mod. rxn. to HCL; Fe staining (mottling); no odor; damp. (sporatic wht. ppt. throughout)	6.0 8.0 10.0	T-4 T-5		2.5 / 2.5 2.5 / 2.5		9:04 8.5 8.5 - 13.5 Run # 3
CL	12.1 - 16.3' GRAVELLY SANDY CLAY: Lt. olive gray (5Y 5/2); ~70% fines, mod. plastic, slight dilatancy, med. toughness; ~15% sand, fine-to coarse-grained, mod grading, sub round to angular; qtz. frags; heavy rxn to HCL; no odor; damp.	12.0 14.0	T-6 T-7		2.5 / 2.5 0.8 / 2.5		9:15 13.5 9:26 13.5 - 18.5 Run # 4 ~15.0' augers chattering.
SW	16.3 - 18.7' GRAVELLY SAND: Dk. yel. brn. (10YR 4/2); <5% fines; ~65% sand, fine- to medium-grained, well graded, sub rounded, subangular; Fe staining; saturated (but drained)	16.0 18.0	T-8		2.5 / 2.5		Ernest Solomon CEG # 350 18.5
SM	18.7 - 24.1' SILTY SAND:	20.0	T-9		2.1 / 2.5		18.5 - 23.5 Run # 5 No dripping water on sampler.

Wahler Associates

JASCO CHEMICAL CORPORATION

EXPLORATION BORING LOG		BORING NO.
PROJECT NO.: JCO104H	SHEET NO.: 1 OF 2	I-3

BORING LOCATION		GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR	TOTAL DEPTH
DRILL RIG	BORING DIA. / DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
SM	18.7-24.1 SILTY SAND: Dk. yel. brn. (10YR 4/2); ~40% fines; slight to med. plastic (grading more or less), quick dilatancy, low toughness; ~60% sand, fine- to coarse-grained (mostly fine, sporatic coarse), sub-angular; Fe staining; mod. pervious; moist.	20.0	T-9 (cont.)		2.1/2.5		No water coming to surface
		22.0	T-10		2.5/2.5		
							23.5
CL	- occasional gravel frags 23.0-24.1 grading less sandy	24.0	T-11		2.5/2.5		23.5-28.5 Run # 6 24.0' H_2O level when augers removed.
	24.1-33.5' SANDY CLAY: Dk. greenish gray (5G 4/1); ~85% fines, mod to high plastic, med. to high toughness; ~15% sand, fine-grained, poorly graded; no organics; no odor; moist.	26.0	T-12		2.5/2.5		
		28.0	T-13		2.5/2.5		28.5 28.5-33.5 Run # 7
	29.0-32.5 less sandy, almost fat clay	30.0					
	33.3-33.5 grading yel. brn sandy clay.	32.0	T-14		2.5/2.5		11:15
	Bottom Hole 33.5						33.5
		34.0					Terminated boring at 33.5'. Pulled augers, hole open to 33.5', installed grout pipe to bottom hole, filled hole with grout. Cuttings and displaced H_2O removed from site.

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Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG	BORING NO.
		PROJECT NO. JCO 104H / SHEET NO. 2 OF 2	I-3

BORING LOCATION JASCO CHEMICAL, Behind building in Central Expressway Median			GROUND EL.
DEPTH/~~ELEV~~. WATER	DRILL CONTRACTOR WEEKS		TOTAL DEPTH 71.0
DRILL RIG Failing 1500	BORING DIA. 13.5	DATE DRILLED 18 Aug '87	LOGGED BY R.O.J. S.

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
	As log of boring I-3	0.0				RD	Start setting up ~ 12:00 Drilling 1:58 pm Drilling with a 13.5" tri-cone bit. Drilling mud is POLY-GEL with H_2O. Doug - Driller Richard & Jim - Helpers
		2.0					
		4.0					
		6.0					
		8.0					
		10.0					
		12.0					
		14.0					
SP/SW	16.0	16.0	B-1				
	18.5	18.0					2:53 18.0
		20.0					Ernest Solomon CEG #350

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG	BORING NO.
		PROJECT NO. JCO 104H — SHEET NO. 1 OF 4	I-3A

BORING LOCATION			GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR		TOTAL DEPTH
DRILL RIG	BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
		20.0				RD	
		22.0					
	24.0 - SANDY CLAY: As log of boring I-3	24.0					Drilled to 29.0' with 13½ tri-cone, stopped at 29.0' and installed 8 5/8" steel casing. Pushed casing to 31.0' with rig.
		26.0					
		28.0	B-2				3:18 18 AUG. '87 29.0'
		30.0				PUSH	19 AUG Arrived on site 8:00AM Switched to 7.0" tri-cone start drilling 11:03 AM
			R-1	8	1.8 / 2.0	DR	11:21 31.0 - 33.0' Drove 3.0" split spoon sampler w/a 140 lb slide hammer Free Falling 30.0" per blow. Sampler is lined with 2½" x 6.0" brass tubes (termed R-1, R-2, ..., etc).
		32.0	R-2	15			
			R-3	24			
			R-4	30			
		34.0	B-3			RD	11:38
		36.0					
		38.0	B-4				
	~39.0 grading more sandy (rounded).	40.0					

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO. JCO 104 H	SHEET NO. 2 OF 4	I-3A

BORING LOCATION		GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR	TOTAL DEPTH
DRILL RIG / BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
CL	24.1 - 47.5 SANDY CLAY: (cont.)	40.0				RD	
		42.0	B-4 (cont)				WELL CONSTRUCTION 2.0" SCH 40 PVC 0.0 - 49.0 solid 49.0 - 55.0 slotted Install locking well cover. SEAL 0.0 - 43.5 grout 43.5 - 46.5 bentonite
		44.0					12:20 45.0'
	47.0-47.5' grades to sandy	46.0	B-5				46.5 - 55.5 SAND (#3) 55.0 - 59.5 Bentonite 59.5 - 71.0 SAND
SW	47.5 - 71.0 GRAVELLY SAND: DK yel. brn. (10YR 4/2); ~5-10% fines, non plastic; ~60-70% sand, fine- to coarse-grained, mod to well graded, sub rounded; sandstone fragments, Fe coatings; ~20-35% gravel, fine, rounded, Fe coatings; noncemented; soil is highly pervious no odor; very dense; saturated.	48.0	B-6				
			R-5 B-7	135	0.4/0.6	DR	12:30 49.0 - 49.6 Drove 3.0" OD split-spoon sampler with 140 lb slide hammer. Refusal. 49.6
		50.0				RD	
		52.0	B-8				
	54.5 some brn. clay in cuttings.	54.0	B-9				
		56.0					
CL	56.5 - 57.5 Sandy CLAY Blueish gray, roots, damp.		R-6	18			1:25 57.0 - 58.2 Drove split-spoon sampler Refusal @ 58.2'
SW		58.0	R-7 B-10	45 50		DR	
						RD	
		60.0	B-11				

Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO. JCO 104H	SHEET NO. 3 OF 4	I-3A

BORING LOCATION			GROUND EL.
DEPTH/ELEV. WATER	DRILL CONTRACTOR		TOTAL DEPTH
DRILL RIG	BORING DIA.	DATE DRILLED	LOGGED BY

SOIL CLASS.	DESCRIPTION	DEPTH	SAMPLE NO.	PR / RQD	REC.	MODE	REMARKS
SW	47.0- 71.0 GRAVELLY SAND: (cont.)	60.0				RD	
	60.0-71.0 no changes						
		62.0	B-11 (cont.)				
		64.0					
		66.0					
		68.0					69.0' - 71.0' Drove split spoon sampler
			~~R~~	36			
		70.0	R-8	51	1.3	DR	
			R-9	54	2.0		
	Bottom Hole 71.0'		R-10	70			2:40
		72.0					Terminated boring at 71.0'. Flushed hole, backfilled to 59.0' with #3 sand, to 56.0 with bentonite and installed well. Pumped seal after well was in place and placed locking steel cover pipe.
		74.0					

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Wahler Associates	JASCO CHEMICAL CORPORATION	EXPLORATION BORING LOG		BORING NO.
		PROJECT NO. JCO 104 H	SHEET NO. 4 OF 4	I-3A

APPENDIX B

APPENDIX B

LABORATORY INVESTIGATION

A. INTRODUCTION

This appendix includes a discussion of the procedures followed during the laboratory testing performed on soil samples from wells I-2 and I-3. The investigation program was carried out employing, in most cases, currently accepted test procedures of the American Society of Testing and Materials (ASTM).

Undisturbed thin wall tube samples used in the laboratory investigation were obtained during the course of the field investigation as described in the Well Construction Section of this report. Identification of each sample is by holé number, sample number, and depth.

B. INDEX PROPERTIES TESTING

In the field of soil mechanics, it is advantageous to have a standard method of identifying soils and classifying them into categories or groups that have similar or distinct engineering properties. The most commonly used method of identifying and classifying soils according to their engineering properties is the Unified Soil Classification System (USCS), as described by ASTM D2487-83. The USCS is based on a recognition of the various types and significant distribution of soil characteristics, and plasticity of materials.

The index properties tests discussed in this report include the determination of natural and as-tested water content and dry density, vertical permeability, grain-size distribution, and Atterberg limits.

1. Natural Water Content and Dry Density

Natural water content and dry density were determined, usually in conjunction with other tests, on selected undisturbed tube samples. The samples were extruded and visually classified, trimmed to obtain a smooth flat face, and accurately measured to obtain volume and wet weight. The samples were then dried, in accordance with ASTM 2216-80, for a period of 24 hours in an oven maintained at a temperature of 110°C. After drying, the weight of each sample was determined and the moisture content and dry density calculated. All the water content and dry density results are summarized in Table B-1 and are also shown with the various other index and engineering properties test results.

2. Grain-Size Distribution

The gradation characteristics of selected samples were determined in accordance with ASTM D422-63 and USBR E-6, except as modified below. The gravelly samples were initially sieved through the 3/4-inch and 1-1/2-inch sieves. Representative samples were obtained and soaked in water until individual soil particles were separated and then washed on the No. 200 mesh sieve. That portion of the material retained on the No. 200 mesh sieve was oven-dried and then mechanically sieved. A hydrometer analysis was performed on a representative portion of the minus No. 200 mesh material of selected samples. The hydrometer test was run in a constant-temperature hydrometer bath using sodium hexametaphosphate as a dispersing agent. The grain-size distribution tests are presented on Figures B-1 and B-2.

3. Atterberg Limits

Liquid and plastic limits were determined on selected samples in accordance with ASTM Designation D4318-83. Results of the Atterberg limits tests are summarized on Figure B-3.

C. ENGINEERING PROPERTIES TESTING

Vertical permeability tests were performed on selected soil samples from wells I-2 and I-3.

Permeability Tests

The tests were performed in general accordance with the Gorps of Engineers Test Method EM-1110-2-1906. Below is a description of the test procedure.

The samples were extruded from the tubes and placed in a special cradle that supported the specimen horizontally while the ends were trimmed to a flat face. After the initial weight and volume measurements were determined, each specimen was placed in a triaxial cell, encased in a latex membrane and sealed to the bottom pedestal and top cap with rubber "O" rings. After securing the triaxial chamber, the cell was filled with water and transported to the saturation bay. The samples were saturated using a combination vacuum-back pressure technique. A small vacuum was applied to de-air the lines and increase the initial saturation without a change in void ratio. A back pressure of 50 psi was then incrementally applied to obtain a sufficient degree of saturation prior to consolidation. In order to determine whether the back pressure applied was causing complete saturation, Skempton's "B" parameter in excess of 0.9 was measured for all samples. After achieving saturation, the samples were consolidated to pressures equivalent to overburden load.

The permeability was determined by applying a constant head hydraulic gradient and monitoring the flow of water from bottom to top of the sample through calibrated constant diameter sight tubes as a function of time. The consolidation pressure and head pressure used for each test appears on the data sheet. The permeability test results, together with the gradation characteristics of the samples tested are presented in Table B-1.

TABLE B-1

PERMEABILITY TEST RESULTS

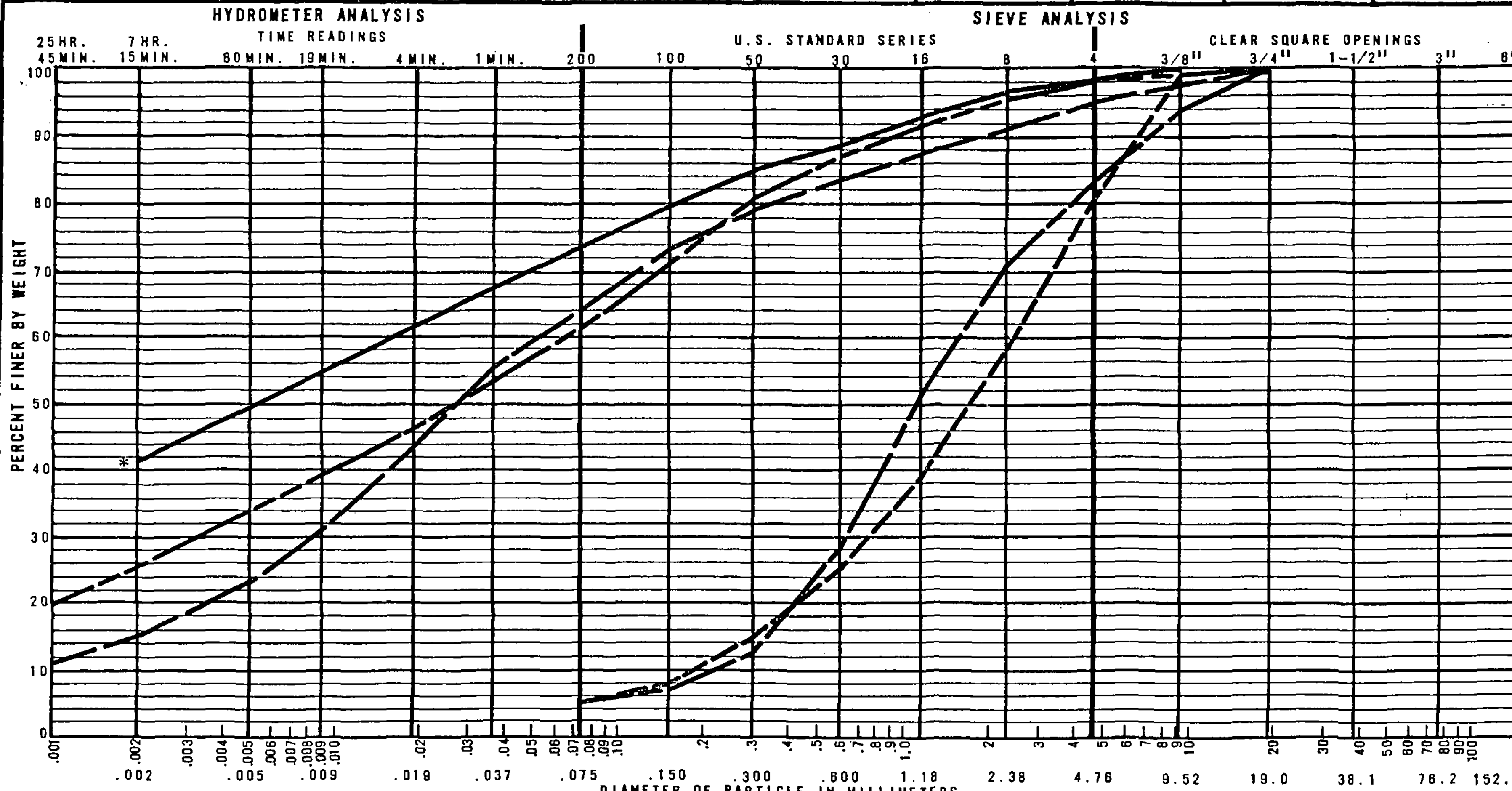
Hole No.	Sample No.	Depth, ft.	USCS Classification	Natural Water Content (%)	Natural Dry Density (pcf)	As-Tested Water Content (%)	As-Tested Dry Density (pcf)	Consolidated Pressure (psi)	Head, (psi)	Coefficient of Permeability cm/sec
I-2	T-6	13.7-14.2	CH	26.2	92.5	29.5	95.2	11	0.5	2.4×10^{-4}*
I-2	T-13	31.7-32.4	SW-SM	15.1	119.1	15.2	121.1	27	0.5	2.3×10^{-4}
I-2	T-15	37.4-37.9	CL	27.5	97.7	25.8	101.5	26	2.0	3.1×10^{-7}
I-2	R-10	47.5-48.0	SW-SM	17.4	110.9	17.9	113.5	32	0.5	2.3×10^{-4}
I-2	R-15	56.5-57.0	CL	23.0	104.8	20.8	110.5	36	5.0	2.3×10^{-8}
I-3	T-6	12.9-13.4	CL	20.0	102.6	23.7	105.1	11	0.5	2.5×10^{-4}*
I-3	T-10	22.7-23.2	SP-SM	14.8	122.7	14.3	124.8	23	1.0	5.2×10^{-5}
I-3	T-12	26.2-26.7	CL	25.7	98.5	24.3	101.7	22	2.0	2.8×10^{-6}
I-3	R-5	49.0-49.5	SW	13.4	124.7	12.3	128.2	37	0.5	1.2×10^{-4}
I-3	R-6	57.0-57.5	SC	21.6	108.4	19.7	112.5	38	2.0	2.9×10^{-7}

*Permeability was influenced by roots and root holes in samples.

Samples were tested in triaxial cells after back pressure saturation and consolidation equal to overburden load. The permeability was determined by applying a constant head hydraulic gradient and monitoring the flow of water from bottom to top of the sample through calibrated constant diameter sight tubes as a function of time.

*DISPERSING AGENT WAS INEFFECTIVE AFTER 7 HOUR READING

KEY:					
LL	52	NP	38	NP	42
PL	20	NP	21	NP	20
PI	32	0	17	0	22
NAT. W/C	27.1	15.1	27.5	17.4	21.4
SPEC. GRAVITY	----	----	----	----	----
CLASSIF.SYMB.	CH	SW-SM	CL	SW-SM	CL
SAMPLE NO.	T-6	T-13	T-15	R-10	R-15
DEPTH, FT.	13.7-14.2	31.7-32.9	37.4-37.9	47.5-48.0	56.5-57.0
HOLE NO.	I-2	I-2	I-2	I-2	I-2



Woodward-Clyde Associates

JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION

PALO ALTO • CALIFORNIA

GRADATION TEST RESULTS
ASTM D422-63 & USBR E-6

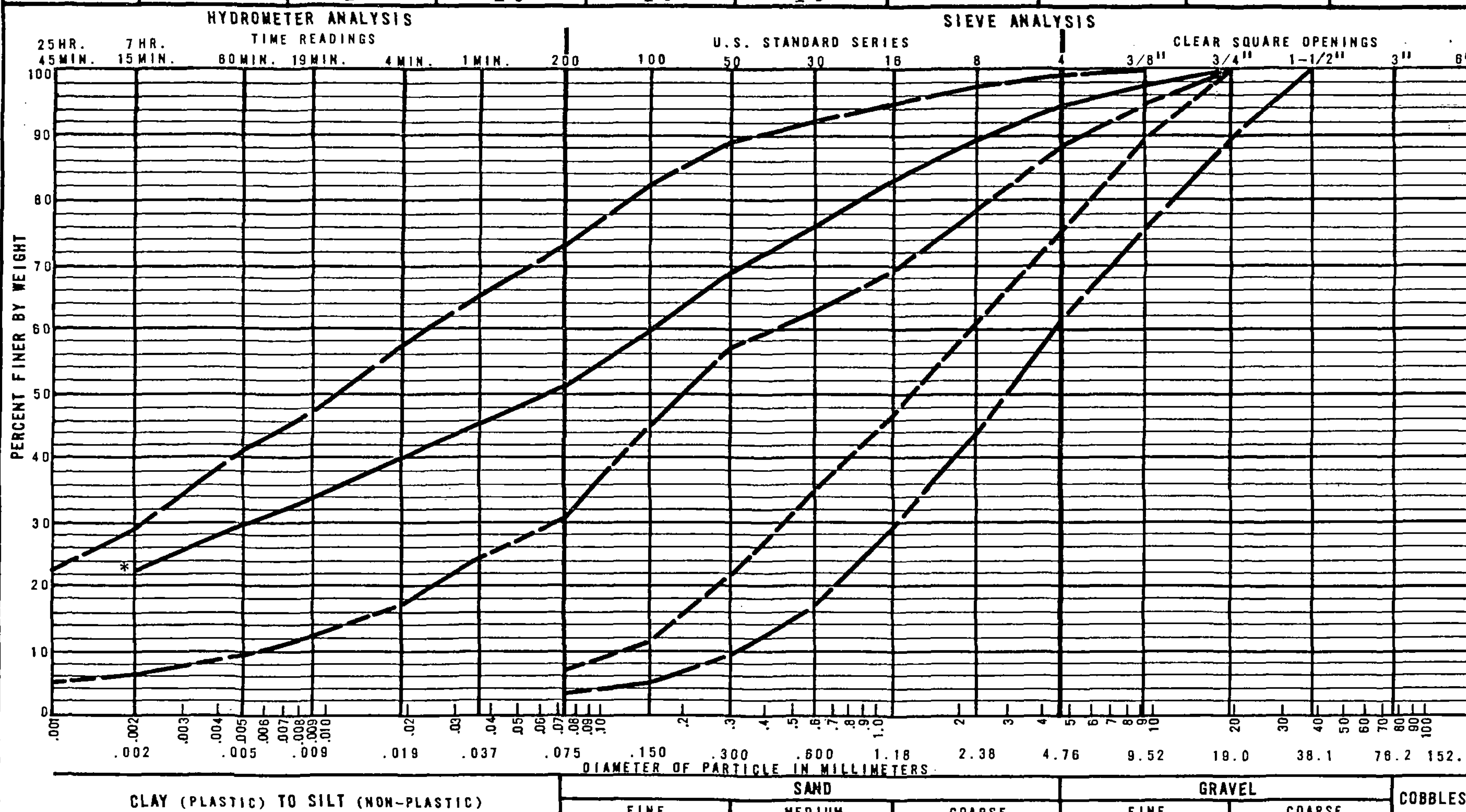
PROJECT NO. JCO-104H

DATE OCTOBER 1987

FIGURE NO. B-1

*DISPERSING AGENT WAS INEFFECTIVE AFTER 7 HOUR READING.

KEY:					
LL	45	NP	37	NP	32
PL	19	NP	21	NP	21
PI	26	0	16	0	11
NAT. W/C	18.6	14.8	24.8	13.4	20.2
SPEC. GRAVITY	----	----	----	----	----
CLASSIF.SYMB.	CL	SP-SM	CL	SW	SC
SAMPLE NO.	T-6	T-10	T-12	R-5	R-6
DEPTH, FT.	12.9-13.4	22.7-23.2	26.2-26.7	49.0-49.5	57.0-57.5
HOLE NO.	I-3	I-3	I-3	I-3	I-3



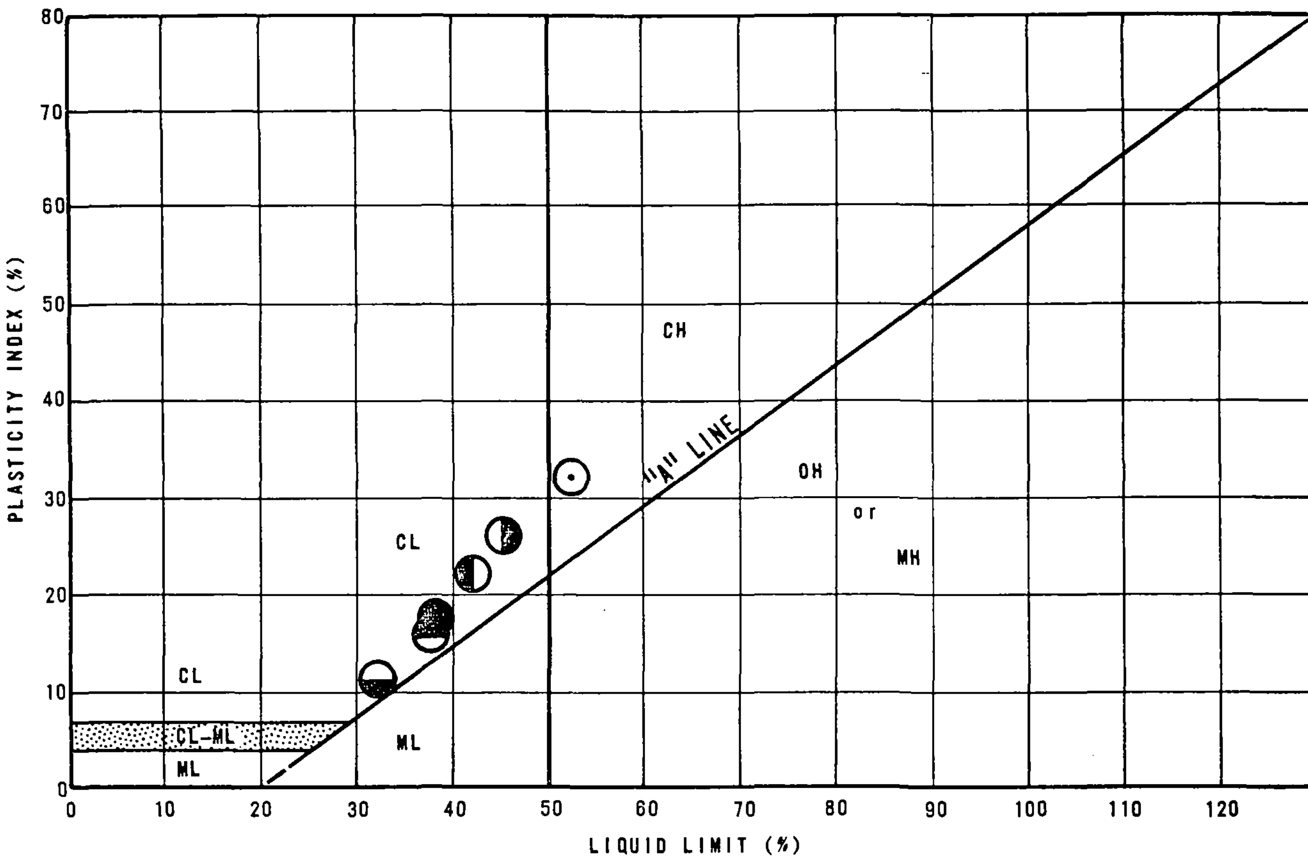
Woodward-Clyde Associates

JASCO CHEMICAL CORPORATION
PHASE II HYDROGEOLOGIC INVESTIGATION
PALO ALTO • CALIFORNIA

GRADATION TEST RESULTS
ASTM D422-63 & USBR E-6

PROJECT NO.	DATE	FIGURE NO.
JCO-104H	OCTOBER 1987	B-2

PLASTICITY CHART



PLASTICITY DATA

KEY SYMBOL	HOLE NUMBER	DEPTH (ft)	NATURAL WATER CONTENT W (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	LIQUIDITY INDEX $\left(\frac{W - PL}{LL - PL}\right)$	UNIFIED SOIL CLASSIFICATION SYMBOL
⊙	I-2, T-6	13.7-14.2	27.1	20	52	32	-----	CH
●	I-2, T-15	37.4-37.9	27.5	21	38	17	-----	CL
◐	I-2, R-15	56.5-57.0	21.4	20	42	22	-----	CL
◑	I-3, T-6	12.9-13.4	18.6	19	45	26	-----	CL
◒	I-3, T-12	26.2-26.7	24.8	21	37	16	-----	CL
◓	I-3, R-6	57.0-57.5	20.2	21	32	11	-----	SC

Wahler Associates	JASCO CHEMICAL CORPORATION PHASE II HYDROGEOLOGIC INVESTIGATION PALO ALTO • CALIFORNIA	ATTERBERG LIMITS - PLASTICITY DATA ASTM D4318-84		
		PROJECT NO.	DATE	FIGURE NO.
		JCO-104H	OCTOBER 1987	B-3

APPENDIX C

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Robert Breynaert

Date Sampled: 08/20/87
Date Received: 08/20/87
Date Extracted: 09/03/87
Date Reported: 09/10/87
Project No. JCO-104H

Sample Number
7081483

Sample Description
Water, JCO-817, Tap

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Acrolein.....................		-	trans-1,2-Dichloroethene...........	<	0.5
Acrylonitrile................		-	1,2-Dichloropropane................	<	0.5
Benzene......................		-	1,3-Dichloropropene................	<	0.5
Bromomethane.................	<	0.5	Ethylbenzene.......................		-
Bromodichloromethane.........		0.71	Methylene chloride.................	<	0.5
Bromoform....................	<	0.5	1,1,2,2-Tetrachloroethane..........	<	0.5
Carbon tetrachloride.........	<	0.5	Tetrachloroethene..................	<	0.5
Chlorobenzene................		-	1,1,1-Trichloroethane..............	<	0.5
Chloroethane.................	<	0.5	1,1,2-Trichloroethane..............	<	0.5
2-Chloroethylvinyl ether.....	<	0.5	Trichloroethene....................	<	0.5
Chloroform...................		71	Toluene............................		-
Chloromethane................	<	0.5	Vinyl chloride.....................	<	0.5
Dibromochloromethane.........	<	0.5	1,2-Dichlorobenzene................	<	0.5
1,1-Dichloroethane...........	<	0.5	1,3-Dichlorobenzene................	<	0.5
1,2-Dichloroethane...........	<	0.5	1,4-Dichlorobenzene................	<	0.5
1,1-Dichloroethene...........	<	0.2			

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 601 of the EPA was used for this analysis.

mpr

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Robert Breynaert

Date Sampled: 08/20/87
Date Received: 08/20/87
Date Extracted: 09/03/87
Date Reported: 09/10/87
Project No. JCO-104H

Sample Number	Sample Description
7081484	Water, JCO-817, Tank

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein		-	trans-1,2-Dichloroethene	<	0.5
Acrylonitrile		-	1,2-Dichloropropane	<	0.5
Benzene		-	1,3-Dichloropropene	<	0.5
Bromomethane	<	0.5	Ethylbenzene		-
Bromodichloromethane		1.1	Methylene chloride	<	0.5
Bromoform	<	0.5	1,1,2,2-Tetrachloroethane	<	0.5
Carbon tetrachloride	<	0.5	Tetrachloroethene	<	0.5
Chlorobenzene		-	1,1,1-Trichloroethane	<	0.5
Chloroethane	<	0.5	1,1,2-Trichloroethane	<	0.5
2-Chloroethylvinyl ether	<	0.5	Trichloroethene	<	0.5
Chloroform		72	Toluene		-
Chloromethane	<	0.5	Vinyl chloride	<	0.5
Dibromochloromethane	<	0.5	1,2-Dichlorobenzene	<	0.5
1,1-Dichloroethane	<	0.5	1,3-Dichlorobenzene	<	0.5
1,2-Dichloroethane	<	0.5	1,4-Dichlorobenzene	<	0.5
1,1-Dichloroethene	<	0.2			

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 601 of the EPA was used for this analysis.

mpr

ANAMETRIX, INC.
LABORATORY SERVICES
ENVIRONMENTAL • ANALYTICAL CHEMISTRY
2754 AIELLO DRIVE • SAN JOSE, CA 95111 • (408) 629-1132

RECEIVED
OCT 5 - 1987
WAHLER
ASSOCIATES

September 9, 1987
Work Order Number 8708113
Date Received 8/31/87
Project No. JCO-104H

Robert Breynaert
Wahler Associates
P.O. Box 10023
Palo Alto, CA 94303

One water sample was received for analysis of halogenated and aromatic volatile organics by gas chromatography, using the following EPA method(s):

ANAMETRIX I.D.	SAMPLE I.D.	METHOD(S)
8708113-01	U-2 (V-2)	601/602

RESULTS

See enclosed data sheets, Forms 1-1 thru 2-1.

EXTRA COMPOUNDS

Confirmation by GC/MS indicates that the following compounds were present below instrument detection limit: chloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; trichloroethene. Also detected by GC/MS were acetone, 2-butanone (methyl ethyl ketone).

DOCUMENT INVENTORY

See enclosed documents 1 thru 17.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

Sarah Schoen

Sarah Schoen, Ph.D.
GC Supervisor

SRS/qp

ORGANICS DATA ANALYSIS SHEET - EPA METHOD 601/8010

Sample I.D. : U-2 (V-2)
Matrix : WATER
Date sampled : 8-27-87
Date analyzed : 9-8-87
Dilution : 1:100

Anametrix I.D. : 8708113-01
Analyst : MCT
Supervisor : SN
Date released : 9-9-87

CAS #	Compound Name	Det. Limit (ug/l)	(ug/l)	Q
74-87-3	* Chloromethane	100		U
74-83-9	* Bromomethane	50		U
75-71-8	* Dichlorodifluoromethane	100		U
75-01-4	* Vinyl Chloride	50		U
75-00-3	* Chloroethane	50		U
75-09-2	* Methylene Chloride	50	1700	+
79-69-4	* Trichlorofluoromethane	50		U
75-35-4	* 1,1-Dichloroethene	50		U
75-34-3	* 1,1-Dichloroethane	50	630	+
156-59-2	# Cis-1,2-Dichloroethene	50		U
156-60-5	* Trans-1,2-Dichloroethene	50		U
67-66-3	* Chloroform	50		U
76-13-1	# Trichlorotrifluoroethane	50		U
107-06-2	* 1,2-Dichloroethane	50		U
71-55-6	* 1,1,1-Trichloroethane	50	200	+
56-23-5	* Carbon Tetrachloride	50		U
75-27-4	* Bromodichloromethane	50		U
78-87-5	* 1,2-Dichloropropane	50		U
10061-02-6	* Trans-1,3-Dichloropropene	50		U
79-01-6	* Trichloroethene	50		U
124-48-1	* Dibromochloromethane	50		U
79-00-5	* 1,1,2-Trichloroethane	50		U
10061-01-5	* cis-1,3-Dichloropropene	50		U
110-75-8	* 2-Chloroethylvinylether	100		U
75-25-2	* Bromoform	50		U
127-18-4	* Tetrachloroethene	50		U
79-34-5	* 1,1,2,2-Tetrachloroethane	50		U
108-90-7	* Chlorobenzene	50		U
541-73-1	* 1,3-Dichlorobenzene	100		U
95-50-1	* 1,2-Dichlorobenzene	100		U
106-46-7	* 1,4-Dichlorobenzene	100		U
	% Surrogate Recovery		61	

* A 601/8010 approved compound (Federal Register, 10/26/84)
\# A compound added by Anametrix, Inc.

For reporting purposes, the following qualifiers (Q) are used:
+ : A value greater than or equal to the method detection limit.
U : The compound was analyzed for but was not detected.

Form 1-1.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 602/8020

Sample I.D. : U-2
Matrix : WATER
Date sampled : 8-27-87
Date analyzed : 9-8-87
Dilution : 1:20

Anametrix I.D. : 8708113-0
Analyst : MG
Supervisor : MS
Date released : 9-9-87

CAS #	Compound Name	Det. Limit (ug/l)	(ug/l)	Q
71-43-2	Benzene	10	20	+
108-88-3	Toluene	10	250	+
108-90-7	Chlorobenzene	10		U
100-41-4	Ethylbenzene	10		U
	Xylenes	20	50	+
95-50-1	1,2-Dichlorobenzene	20		U
541-73-1	1,3-Dichlorobenzene	20		U
106-46-7	1,4-Dichlorobenzene	20		U
78-93-3	Methyl ethyl ketone	200		U
	% Surrogate Recovery		82	

For reporting purposes, the following qualifiers (Q) are used:
+ : A value greater than or equal to the method detection limit.
U : The compound was analyzed for but was not detected.

Form 2-1.

ANAMETRIX, INC.
LABORATORY SERVICES
ENVIRONMENTAL • ANALYTICAL CHEMISTRY
2754 AIELLO DRIVE • SAN JOSE, CA 95111 • (408) 629-1132

Document Inventory

Project # 8708113

DOCUMENT CONTROL #	DOCUMENT TYPE
8708113-000001	Initial Method 601 Calibration
2-12	Daily Method 601 Calibration Chromatograms
13	Sample screen
14-16	Sample Chromatograms
17	Sample Chromatogram Method 625

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description Water	Detection Limit ppm	Total Hydrocarbons as Paint Thinner ppm
7082427	V-1	1	< 1.0
7082428	V-2	1	< 1.0
7082429	V-3	1	< 1.0
7082430	V-4	1	< 1.0
7082431	V-5	1	< 1.0
7082432	V-6	1	< 1.0
7082433	V-7	1	< 1.0
7082434	I-1	1	< 1.0

NOTE: Analysis was performed using EPA methods 3510 and 8015.

SEQUOIA ANALYTICAL LABORATORY

Scott Cocanour

for Arthur G. Burton
Laboratory Director

mpr

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082427	Water, V-1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

Scott Cocanour

Arthur G. Burton
Laboratory Director

NOTE: Methods 601 & 602 of the EPA were used for this analysis.

mpr

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Brenaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082427	Water, V-1

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

SEQUOIA ANALYTICAL LABORATORY

Scott Cocanour

Arthur G. Burton
Laboratory Director

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082427	Water, V-1

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	< 0.5

SEQUOIA ANALYTICAL LABORATORY

Scott Corcoran

Arthur G. Burton
Laboratory Director

mpr

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082428	Water, V-2

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Compound	Result	Compound	Result
Acrolein	< 10,000	trans-1,2-Dichloroethene	< 50
Acrylonitrile	< 10,000	1,2-Dichloropropane	< 50
Benzene	< 50	1,3-Dichloropropene	< 50
Bromomethane	< 50	Ethylbenzene	< 50
Bromodichloromethane	< 50	Methylene chloride	270
Bromoform	< 50	1,1,2,2-Tetrachloroethane	< 50
Carbon tetrachloride	< 50	Tetrachloroethene	< 50
Chlorobenzene	< 50	1,1,1-Trichloroethane	270
Chloroethane	< 50	1,1,2-Trichloroethane	< 50
2-Chloroethylvinyl ether	< 50	Trichloroethene	< 50
Chloroform	< 50	Toluene	< 50
Chloromethane	< 50	Vinyl chloride	< 50
Dibromochloromethane	< 50	1,2-Dichlorobenzene	< 50
1,1-Dichloroethane	630	1,3-Dichlorobenzene	< 50
1,2-Dichloroethane	< 50	1,4-Dichlorobenzene	< 50
1,1-Dichloroethene	< 50		

SEQUOIA ANALYTICAL LABORATORY

Scot Cocanour

Arthur G. Burton
Laboratory Director

sls

NOTE: Methods 601 & 602 of the EPA were used for this analysis.

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Brenaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082428	Water, V-2

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

SEQUOIA ANALYTICAL LABORATORY

Scot Cocanour

Arthur G. Burton
Laboratory Director

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082428	Water, V-2

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	<50
Xylene, ppb	<50

SEQUOIA ANALYTICAL LABORATORY

Scott Cocan

Arthur G. Burton
Laboratory Director

mpr

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082437	Water, V-2 Duplicate

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	< 10,000	trans-1,2-Dichloroethene	< 50
Acrylonitrile	< 10,000	1,2-Dichloropropane	< 50
Benzene	< 50	1,3-Dichloropropene	< 50
Bromomethane	< 50	Ethylbenzene	< 50
Bromodichloromethane	< 50	Methylene chloride	200
Bromoform	< 50	1,1,2,2-Tetrachloroethane	< 50
Carbon tetrachloride	< 50	Tetrachloroethene	< 50
Chlorobenzene	< 50	1,1,1-Trichloroethane	250
Chloroethane	< 50	1,1,2-Trichloroethane	< 50
2-Chloroethylvinyl ether	< 50	Trichloroethene	< 50
Chloroform	< 50	Toluene	< 50
Chloromethane	< 50	Vinyl chloride	< 50
Dibromochloromethane	< 50	1,2-Dichlorobenzene	< 50
1,1-Dichloroethane	570	1,3-Dichlorobenzene	< 50
1,2-Dichloroethane	< 50	1,4-Dichlorobenzene	< 50
1,1-Dichloroethene	< 20		

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082437	Water, V-2, Duplicate

ANALYSIS

Methyl Ethyl Ketone, ppm	< 50
Xylenes	< 50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082429	Water, V-3

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	12
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	6.3
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	1.8
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	15	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	1.0	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	1.3		

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Received: 08/31/87
Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082429	Water, V-3

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082429	Water, V-3

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	8.0

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Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082430	Water, V-4

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	< 10,000	trans-1,2-Dichloroethene	< 5.0
Acrylonitrile	< 10,000	1,2-Dichloropropane	< 5.0
Benzene	< 5.0	1,3-Dichloropropene	< 5.0
Bromomethane	< 5.0	Ethylbenzene	< 5.0
Bromodichloromethane	< 5.0	Methylene chloride	< 5.0
Bromoform	< 5.0	1,1,2,2-Tetrachloroethane	< 5.0
Carbon tetrachloride	< 5.0	Tetrachloroethene	< 5.0
Chlorobenzene	< 5.0	1,1,1-Trichloroethane	60
Chloroethane	< 5.0	1,1,2-Trichloroethane	< 5.0
2-Chloroethylvinyl ether	< 5.0	Trichloroethene	< 5.0
Chloroform	< 5.0	Toluene	< 5.0
Chloromethane	< 5.0	Vinyl chloride	< 5.0
Dibromochloromethane	< 5.0	1,2-Dichlorobenzene	< 5.0
1,1-Dichloroethane	400	1,3-Dichlorobenzene	< 5.0
1,2-Dichloroethane	< 5.0	1,4-Dichlorobenzene	< 5.0
1,1-Dichloroethene	36		

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Received: 08/31/87
Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082430	Water, V-4

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082430	Water, V-4

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 5
Xylene, ppb	< 5

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Date Received: 08/31/87
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Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082431	Water, V-5

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Compound	Result
Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082431	Water, V-5

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Project No. JCO-104H

Sample Number	Sample Description
7082431	Water, V-5

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	< 0.5

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Date Received: 08/31/87
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Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082432	Water, V-6

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Compound	Result
Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	2.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082432	Water, V-6

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082432	Water, V-6

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	< 0.5

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Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082433	Water, V-7

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	24
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	1.9
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	16
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082433	Water, V-7

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082433	Water, V-7

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	< 0.5

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Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082434	Water, I-1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Compound	Result
Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	2.3
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	1.9
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Extracted: 09/04/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082434	Water, I-1

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

NOTE: Method 604 of the EPA was used for this analysis.

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Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082434	Water, I-1

ANALYSIS

Methanol, ppm	< 1
Ethanol, ppm	< 1
Isopropyl Alcohol, ppm	< 1
Acetone, ppm	< 1
Methyl Ethyl Ketone, ppb	< 0.5
Xylene, ppb	< 0.5

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Date Received: 08/31/87
Date Extracted: 09/09/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082435	Water, I-2

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	14
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	7.1
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	6.8
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

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NOTE: Method 624 of the EPA was used for this analysis.

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Date Received: 08/31/87
Date Extracted: 09/09/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082435	Water, I-2

- Open Scan -
NON-PRIORITY POLLUTANTS
VOLATILE ORGANIC COMPOUNDS
results in ppb

No additional peaks > 10 ppb were detected for identification by NBS spectral library.

SEQUOIA ANALYTICAL LABORATORY

Scott Cocan

Arthur G. Burton
Laboratory Director

sls

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2549 Middlefield Road
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Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/09/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number
7082436

Sample Description
Water, I-3

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

Scot Corcoran

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

mpr

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Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/09/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082436	Water, I-3

- Open Scan -
NON-PRIORITY POLLUTANTS
VOLATILE ORGANIC COMPOUNDS
results in ppb

No additional peaks > 10 ppb were detected for identification by NBS spectral library.

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number
7082438

Sample Description
Water, Field Blank

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082438	Water, Field Blank

ANALYSIS

Methyl Ethyl Ketone, ppm	< 0.5
Xylenes	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Extracted: 09/11/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082439	Water, Method Blank

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

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Arthur G. Burton
Laboratory Director

NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/16/87
Project No. JCO-104H

Sample Number	Sample Description
7082439	Water, Method Blank

ANALYSIS

Methyl Ethyl Ketone, ppm	< 0.5
Xylenes	< 0.5

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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ANRESCO
INCORPORATED
ANALYSIS RESEARCH

1370 - VAN DYKE AVENUE
SAN FRANCISCO, CALIFORNIA 94124
(415) 822-1100

07 October 1987

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303

File No. 987125 A-E

Attn: Mr. Bob Breynaert

Re: Two water samples and three water blanks as labeled below for EPA methods 601, 602 plus Methyl Ethyl Keytone and Xylene.
A) V-2; B) V-4; C) Field Blank (8:00);
D) Field Blank (8:15); E) Method Blank

Received: 9-28-87

ANALYSIS

ANRESCO #	SAMPLE #	RESULTS		
		EPA-601		
987125A	V-2	Chloroethane	26	ppb
		Methylene Chloride	4600	ppb
		1,1 Dichloroethene	76	ppb
		1,1 Dichloroethane	700	ppb
		1,1,1 Trichloroethane	500	ppb
		Chlorobenzene	37	ppb
		EPA-602		
	V-2	Benzene	7	ppb
		Toluene	200	ppb
		Chlorobenzene	37	ppb
		Methyle Ethyl Keytone	27	ppb
		Xylene	44	ppb
		EPA-601		
987125B	V-4	Chloroethane	59	ppb
		Methylene Chloride	3	ppb
		1,1 Dichloroethene	28	ppb
		1,1 Dichloroethane	1000	ppb
		1,1,1 Trichloroethane	20	ppb
		Chlorobenzene	8	ppb
		1,2 Dichloroethane	8	ppb
		EPA-602		
		Toluene	17	ppb
		Chlorobenzene	8	ppb

Wahler Associates
Ø6 October 1987
page 2.

File No. 987125 A-C

ANRESCO #	SAMPLE #	RESULTS	
987125C		EPA-6Ø1	None Detected
		EPA-6Ø2	None Detected
		MEK, Xylene	None Detected
987125D		Same as 987175C	
987125E		Same as 987175C	

Limit of Detection on all compounds listed in methods 6Ø1 & 6Ø2 but not detected in these samples is estimated to be 1Ø ppb or less.

Spike Recoveries:

Sample V-4 was spiked at a level of 1Ø ppb with methylene chloride and toluene.

Recovery $MeCl_2$ = 9Ø%
Recovery Toluene = 75%

Samples were not filtered.

Reported by,

ANRESCO, INC.

Mary Mesics
Senior Chemist

Eric Tam
Senior Chemist

MM/ET:sc

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description Water,	Detection Limit ppm	Total Hydrocarbons as Paint Thinner ppm
7092015	V-1	1	< 1.0
7092016	V-2	1	< 1.0
7092017	V-3	1	< 1.0
7092018	V-4	1	< 1.0
7092019	V-5	1	< 1.0
7092020	V-6	1	< 1.0
7092021	V-7	1	< 1.0
7092022	I-1	1	< 1.0
7092023	I-2	1	< 1.0
7092024	I-3	1	< 1.0

NOTE: Analysis was performed using EPA methods 3550 and 8015.

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
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Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092015	Water, V-1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<	100
Acrylonitrile	<	100
Benzene	<	0.5
Bromomethane	<	0.5
Bromodichloromethane	<	0.5
Bromoform	<	0.5
Carbon tetrachloride	<	0.5
Chlorobenzene	<	0.5
Chloroethane	<	0.5
2-Chloroethylvinyl ether	<	0.5
Chloroform	<	0.5
Chloromethane	<	0.5
Dibromochloromethane	<	0.5
1,1-Dichloroethane		3.9
1,2-Dichloroethane	<	0.5
1,1-Dichloroethene		0.58
trans-1,2-Dichloroethene		1.4
1,2-Dichloropropane	<	0.5
1,3-Dichloropropene	<	0.5
Ethylbenzene	<	0.5
Methylene chloride	<	0.5
1,1,2,2-Tetrachloroethane	<	0.5
Tetrachloroethene	<	0.5
1,1,1-Trichloroethane	<	0.5
1,1,2-Trichloroethane	<	0.5
Trichloroethene	<	0.5
Toluene	<	0.5
Vinyl chloride	<	0.5
1,2-Dichlorobenzene	<	0.5
1,3-Dichlorobenzene	<	0.5
1,4-Dichlorobenzene	<	0.5

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092015	Water, V-1

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092015	Water, V-1

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/13/87
Date Reported:
Project No. JCO-104H

Sample Number	Sample Description
7092016	Water, V-2

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Compound	Result	Compound	Result
Acrolein	<100	trans-1,2-Dichloroethene	< 50
Acrylonitrile	<100	1,2-Dichloropropane	< 50
Benzene	< 50	1,3-Dichloropropene	< 50
Bromomethane	< 50	Ethylbenzene	< 50
Bromodichloromethane	< 50	Methylene chloride	220
Bromoform	< 50	1,1,2,2-Tetrachloroethane	< 50
Carbon tetrachloride	< 50	Tetrachloroethene	< 50
Chlorobenzene	< 50	1,1,1-Trichloroethane	630
Chloroethane	< 50	1,1,2-Trichloroethane	< 50
2-Chloroethylvinyl ether	< 50	Trichloroethene	< 50
Chloroform	< 50	Toluene	< 50
Chloromethane	< 50	Vinyl chloride	< 50
Dibromochloromethane	< 50	1,2-Dichlorobenzene	< 50
1,1-Dichloroethane	490	1,3-Dichlorobenzene	< 50
1,2-Dichloroethane	< 50	1,4-Dichlorobenzene	< 50
1,1-Dichloroethene	< 50		

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092016	Water, V-2

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092016	Water, V-2

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	26
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	950

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Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092017	Water, V-3

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<	100
Acrylonitrile	<	100
Benzene	<	0.5
Bromomethane	<	0.5
Bromodichloromethane	<	0.5
Bromoform	<	0.5
Carbon tetrachloride	<	0.5
Chlorobenzene	<	0.5
Chloroethane	<	0.5
2-Chloroethylvinyl ether	<	0.5
Chloroform	<	0.5
Chloromethane	<	0.5
Dibromochloromethane	<	0.5
1,1-Dichloroethane		6.6
1,2-Dichloroethane	<	0.5
1,1-Dichloroethene		0.76
trans-1,2-Dichloroethene		9.1
1,2-Dichloropropane	<	0.5
1,3-Dichloropropene	<	0.5
Ethylbenzene	<	0.5
Methylene chloride		12
1,1,2,2-Tetrachloroethane	<	0.5
Tetrachloroethene	<	0.5
1,1,1-Trichloroethane		1.1
1,1,2-Trichloroethane	<	0.5
Trichloroethene	<	0.5
Toluene	<	0.5
Vinyl chloride		0.68
1,2-Dichlorobenzene	<	0.5
1,3-Dichlorobenzene	<	0.5
1,4-Dichlorobenzene	<	0.5

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092017	Water, V-3

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092017	Water, V-3

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092018	Water, V-4

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	
Acrylonitrile	<100	
Benzene	<	5
Bromomethane	<	5
Bromodichloromethane	<	5
Bromoform	<	5
Carbon tetrachloride	<	5
Chlorobenzene	<	5
Chloroethane		39
2-Chloroethylvinyl ether	<	5
Chloroform	<	5
Chloromethane	<	5
Dibromochloromethane	<	5
1,1-Dichloroethane		310
1,2-Dichloroethane	<	5
1,1-Dichloroethene		14
trans-1,2-Dichloroethene	<	5
1,2-Dichloropropane	<	5
1,3-Dichloropropene	<	5
Ethylbenzene	<	5
Methylene chloride	<	5
1,1,2,2-Tetrachloroethane	<	5
Tetrachloroethene	<	5
1,1,1-Trichloroethane		30
1,1,2-Trichloroethane	<	5
Trichloroethene	<	5
Toluene	<	5
Vinyl chloride	<	5
1,2-Dichlorobenzene	<	5
1,3-Dichlorobenzene	<	5
1,4-Dichlorobenzene	<	5

SEQUOIA ANALYTICAL LABORATORY

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Arthur G. Burton
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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092018	Water, V-4

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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Arthur G. Burton
Laboratory Director

NOTE: Method 625 of the EPA was used for this analysis.

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Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092018	Water, V-4

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

Scot Cocanour

Arthur G. Burton
Laboratory Director

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Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092019	Water, V-5

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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Arthur G. Burton
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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092019	Water, V-5

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Method 625 of the EPA was used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number: 7092019

Sample Description: Water, V-5

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

<u>Sample Number</u>

7092020

<u>Sample Description</u>

Water, V-6

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	1.9
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	4.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092020	Water, V-6

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	<	10
2-Chlorophenol	<	10
2,4-Dichlorophenol	<	10
2,4-Dimethylphenol	<	10
2,4-Dinitrophenol	<	10
2-Methyl-4,6-dinitrophenol	<	10
2-Nitrophenol	<	10
4-Nitrophenol	<	10
Pentachlorophenol	<	10
Phenol	<	10
2,4,6-Trichlorophenol	<	10

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092020	Water, V-6

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092021	Water, V-7

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	19
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	2.4
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	23
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/08/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092021	Water, V-7

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Method 625 of the EPA was used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092021	Water, V-7

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092022	Water I-1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	2.0
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	3.0	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092022	Water I-1

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Method 625 of the EPA was used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092022	Water, I-1

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092023	Water, I-2

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS

results in ppb

Compound	Result	Compound	Result
Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092023	Water, I-2

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	<	10
2-Chlorophenol	<	10
2,4-Dichlorophenol	<	10
2,4-Dimethylphenol	<	10
2,4-Dinitrophenol	<	10
2-Methyl-4,6-dinitrophenol	<	10
2-Nitrophenol	<	10
4-Nitrophenol	<	10
Pentachlorophenol	<	10
Phenol	<	10
2,4,6-Trichlorophenol	<	10

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Method 625 of the EPA was used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number: 7092023

Sample Description: Water, I-2

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092024	Water, I-3

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100
Acrylonitrile	<100
Benzene	< 0.5
Bromomethane	< 0.5
Bromodichloromethane	< 0.5
Bromoform	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5
Chloroform	< 0.5
Chloromethane	< 0.5
Dibromochloromethane	< 0.5
1,1-Dichloroethane	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.2
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5
Methylene chloride	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5
Tetrachloroethene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Toluene	< 0.5
Vinyl chloride	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092024	Water, I-3

PHENOLIC COMPOUNDS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	20
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092024	Water, I-3

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5
Methanol	<50
Ethanol	<50
Isopropanol	<50
Acetone	<50

SEQUOIA ANALYTICAL LABORATORY

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Extracted: 10/09/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092025	Water, V-4, Duplicate

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	
Acrylonitrile	<100	
Benzene	<	5
Bromomethane	<	5
Bromodichloromethane	<	5
Bromoform	<	5
Carbon tetrachloride	<	5
Chlorobenzene	<	5
Chloroethane		63
2-Chloroethylvinyl ether	<	5
Chloroform	<	5
Chloromethane	<	5
Dibromochloromethane	<	5
1,1-Dichloroethane		300
1,2-Dichloroethane	<	5
1,1-Dichloroethene		16
trans-1,2-Dichloroethene	<	5
1,2-Dichloropropane	<	5
1,3-Dichloropropene	<	5
Ethylbenzene	<	5
Methylene chloride	<	5
1,1,2,2-Tetrachloroethane	<	5
Tetrachloroethene	<	5
1,1,1-Trichloroethane		31
1,1,2-Trichloroethane	<	5
Trichloroethene	<	5
Toluene	<	5
Vinyl chloride	<	5
1,2-Dichlorobenzene	<	5
1,3-Dichlorobenzene	<	5
1,4-Dichlorobenzene	<	5

SEQUOIA ANALYTICAL LABORATORY

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NOTE: Methods 601 & 602 of the EPA were used for this analysis.

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Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Sample Number	Sample Description
7092025	Water, V-4, Duplicate

ANALYSIS
results in ppb

Methyl-Ethyl Ketone	< 0.5
Xylenes	< 0.5

SEQUOIA ANALYTICAL LABORATORY

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APPENDIX D

SEQUOIA Analytical Laboratory
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Attn: Robert Breynaert

Date Sampled: 08/20/87
Date Received: 08/20/87
Date Reported: 09/10/87
Project No. JCO-104H

Q.C. DATA REPORT

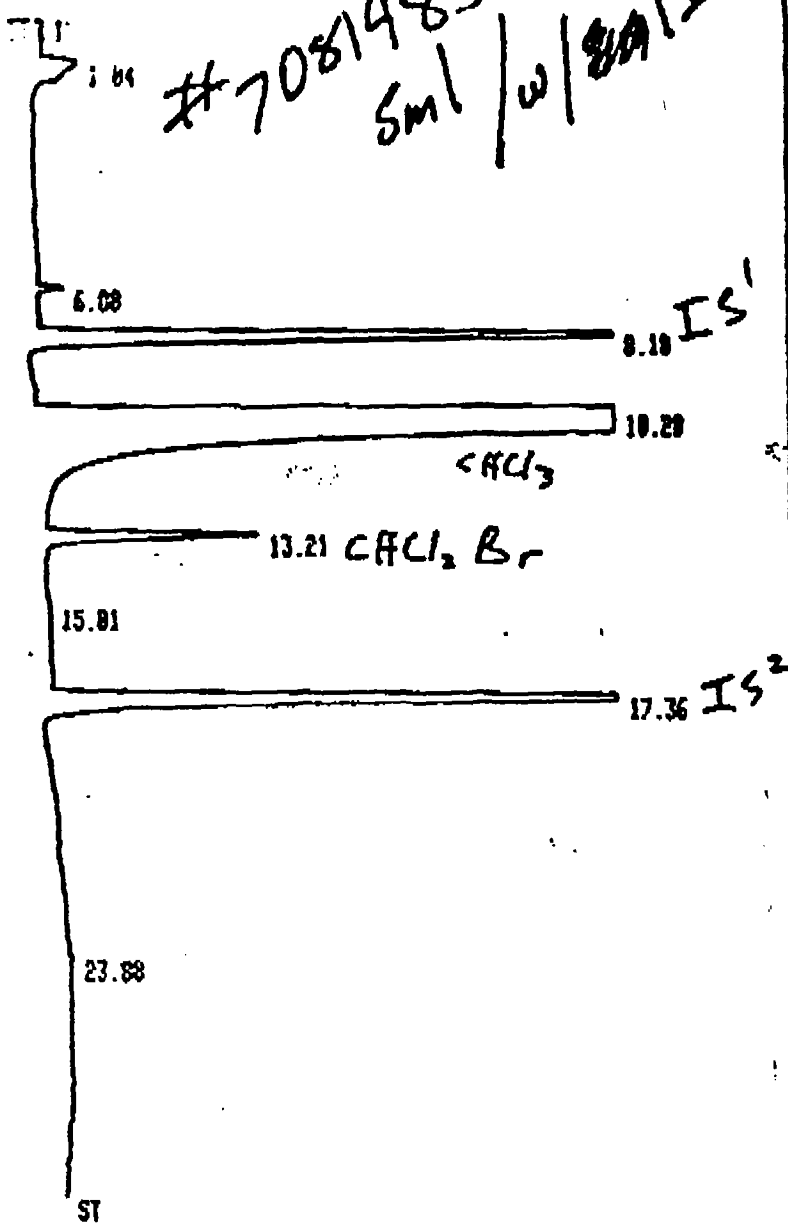
Sample Number	Original Result µg/L	Original Result µg/L	% Deviation
7081826	1.8	1.4	12

Sample Number	Original Result µg/L	Spike Added µg/L	Spike Result µg/L	% Recovery
7081826	1.5	2.0	3.2	85

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

mpr

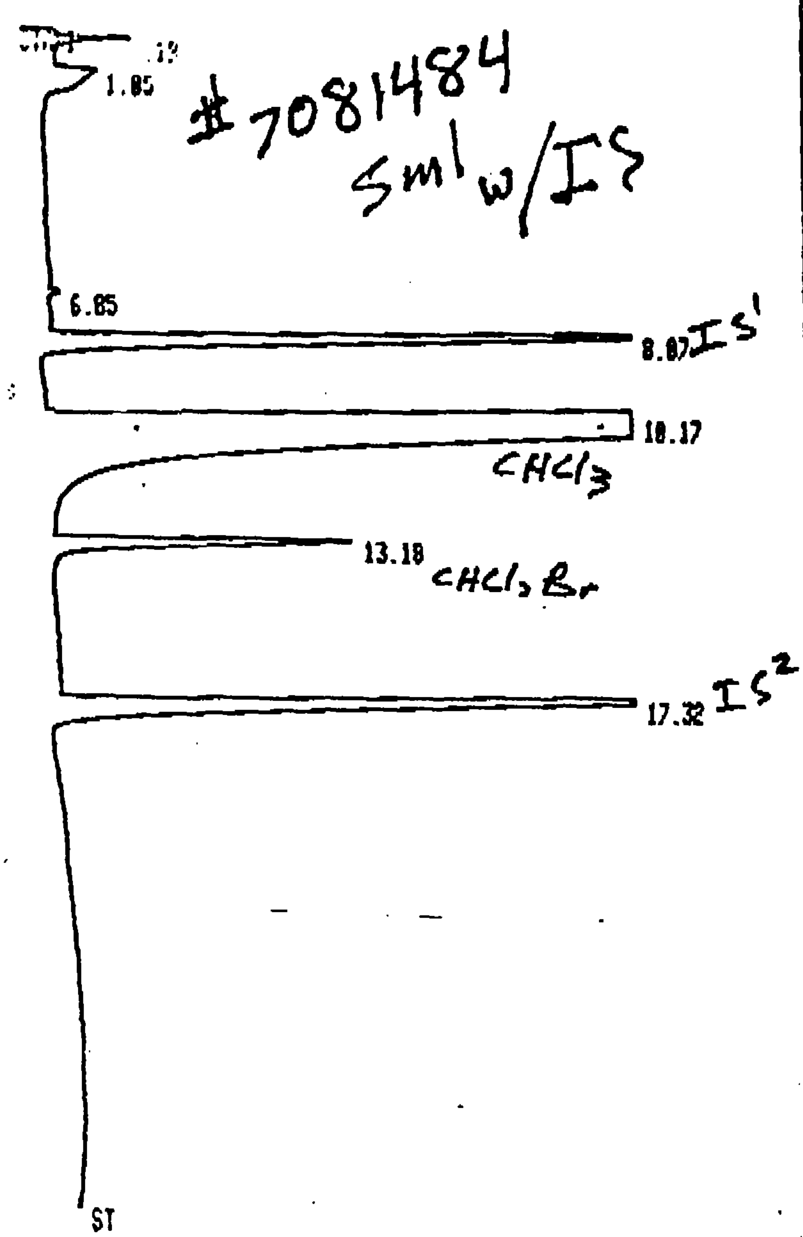


RUN # 297 SEP/03/87 09:27:54
ID -

ISTD

RT	AREA	TYPE	CAL#	AMOUNT
1.04	64810	PP		0.000
6.08	11747	PB	1	0.351
8.10	602680	VB	2&	30.000
10.20	3.3177E+07	PB	3	464.110
13.21	150320	BB	5	4.889
15.01	1552	PY	6	0.115
17.36	750580	BB	8R	41.475
23.88	3834	VB		0.000

TOTAL AREA= 3.4762E+07
ISTD AMT= 3.0000E+01
MUL FACTOR= 1.2600E+00



RUN # 298 SEP/03/87 10:03:27
ID -

ISTD

RT	AREA	TYPE	CAL#	AMOUNT
0.19	26467	BB		0.000
1.05	73099	BP		0.000
6.85	5144	BB	1	0.158
8.07	587090	PB	2&	30.000
10.17	3.3660E+07	PB	3	483.370
13.18	214890	PB	5	7.175
17.32	739690	PB	8R	41.958

TOTAL AREA= 3.5306E+07
ISTD AMT= 3.0000E+01
MUL FACTOR= 1.0000E+00

Duplicate 5ml

THREE POINT CALIBRATION REPORT
EPA METHOD 601/602

Matrix : WATER
Date analyzed : 9-4-87

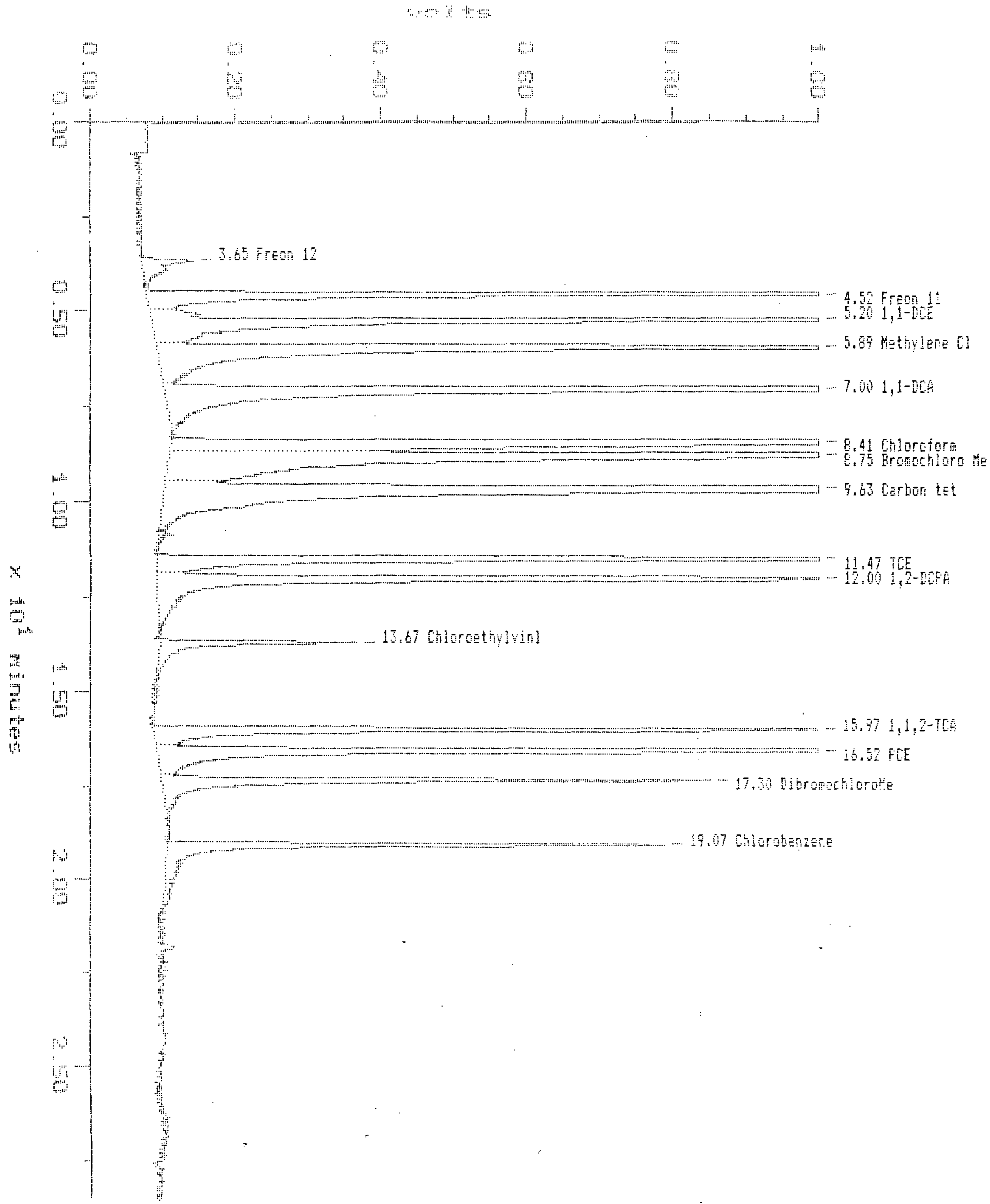
Analyst : MCT
Supervisor : FS

CALIBRATION FACTOR

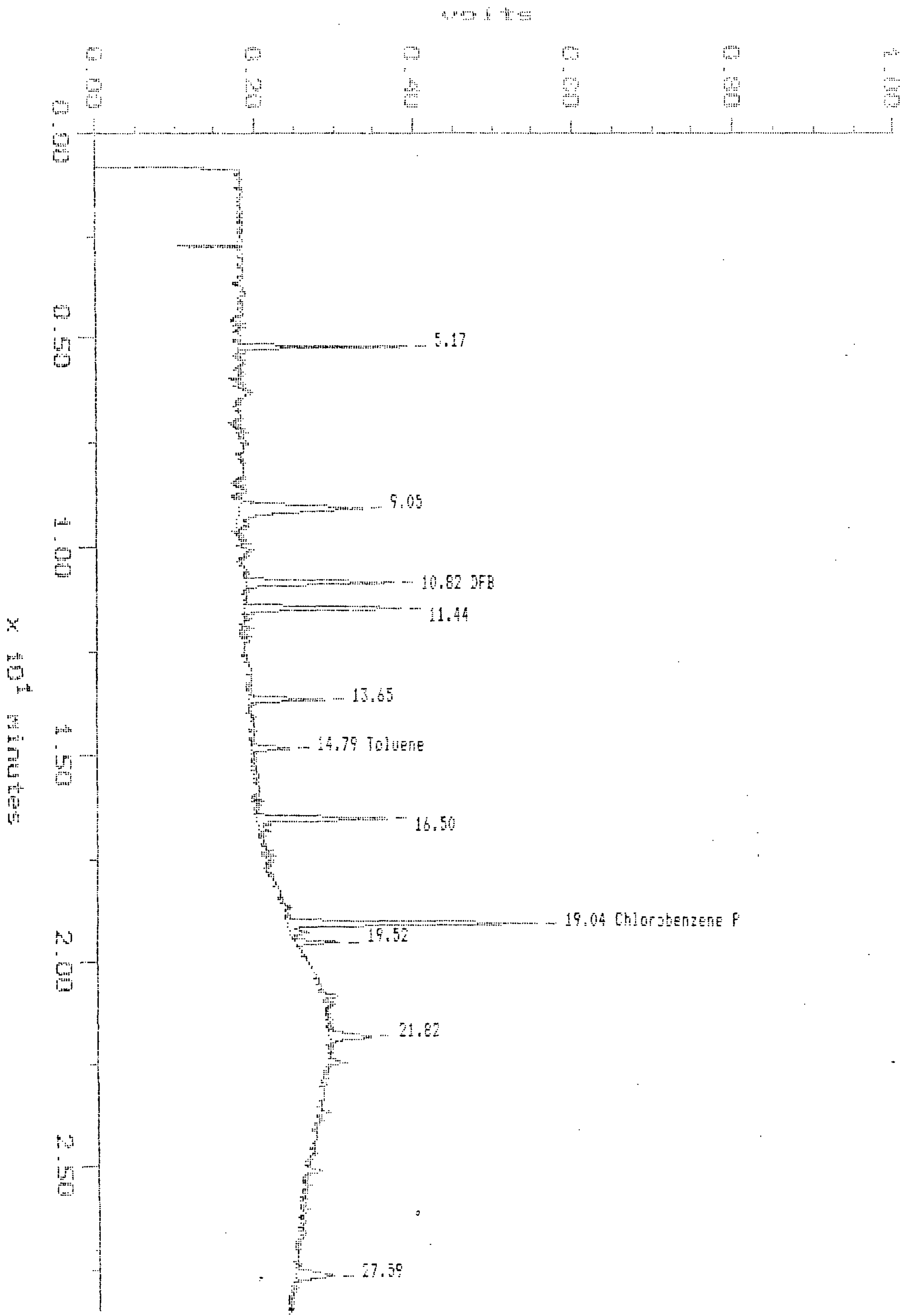
Compound Name	5PPB	10PPB	15PPB	AVG	RSD
----601 COMPOUNDS----					
DICHLORODIFLOUROMETHANE	1.84E+05	7.94E+04	1.40E+05	1.34E+05	32%
TRICHLOROFLOUROMETHANE	9.57E+05	1.19E+06	1.16E+06	1.10E+06	9%
1,1 DICHLOROETHENE	1.40E+06	1.69E+06	1.52E+06	1.54E+06	8%
METHYLENE CHLORIDE	1.90E+06	2.10E+06	1.79E+06	1.93E+06	7%
1,1 DICHLOROETHANE	1.85E+06	2.05E+06	1.93E+06	1.94E+06	4%
CHLOROFORM	2.23E+06	3.25E+06	2.31E+06	2.60E+06	18%
CARBON TETRACHLORIDE	3.12E+06	3.27E+06	3.01E+06	3.13E+06	3%
TRICHLOROETHENE	1.12E+06	1.32E+06	1.25E+06	1.23E+06	7%
1,2 DICHLOROPROPANE	1.11E+06	1.26E+06	1.25E+06	1.21E+06	6%
CHLOROETHYLVYNYLE ETHER	2.34E+05	2.96E+05	2.74E+05	2.68E+05	9%
1,1,2 TRICHLOROETHANE	7.69E+05	9.40E+05	9.40E+05	8.83E+05	9%
TETRACHLOROETHENE	1.30E+06	1.55E+06	1.46E+06	1.44E+06	7%
DIBROMOCHLOROMETHANE	6.04E+05	7.25E+05	7.87E+05	7.05E+05	11%
CHLOROBENZENE	5.52E+05	5.74E+05	5.58E+05	5.61E+05	2%
VINYL CHLORIDE+CHLOROMETH	9.34E+05	1.13E+06	1.29E+06	1.12E+06	13%
BROMOMETHANE+CHLOROETHANE	9.76E+05	1.16E+06	1.30E+06	1.15E+06	12%
TRICHLOROTRIFLOUROETHANE	1.31E+06	1.36E+06	1.27E+06	1.31E+06	3%
TRANS 1,2 DICHLOROETHENE	2.23E+06	2.31E+06	1.99E+06	2.18E+06	6%
CIS 1,2 DICHLOROETHENE	2.07E+06	2.25E+06	2.04E+06	2.12E+06	4%
1,1,1 TRICHLOROETHANE	4.16E+06	3.61E+06	3.15E+06	3.64E+06	11%
1,2 DICHLOROETHANE	1.32E+06	1.59E+06	1.12E+06	1.34E+06	14%
BROMODICHLOROMETHANE	1.11E+06	1.27E+06	1.31E+06	1.23E+06	7%
CIS 1,3 DICHLOROPROPENE	1.55E+06	1.60E+06	1.61E+06	1.59E+06	2%
TRANS 1,2 DICHLOROPROPENE	6.42E+05	7.67E+05	8.33E+05	7.47E+05	11%
BROMOFORM	1.81E+05	3.23E+05	3.65E+05	2.90E+05	27%
TETRACHLOROETHANE	6.67E+05	7.93E+05	8.06E+05	7.55E+05	8%
1,3 DICHLOROBENZENE	6.65E+05	7.96E+05	7.89E+05	7.50E+05	8%
1,4 DICHLOROBENZENE	8.58E+05	8.89E+05	8.68E+05	8.71E+05	1%
1,2 DICHLOROBENZENE	7.30E+05	8.26E+05	8.34E+05	7.97E+05	6%
----602 COMPOUNDS----					
CHLOROBENZENE	2.89E+05	2.58E+05	2.40E+05	2.62E+05	8%
BENZENE	2.71E+05	1.95E+05	2.29E+05	2.32E+05	13%
TOLUENE	3.07E+05	2.88E+05	2.50E+05	2.82E+05	8%
ETHYLBENZENE	2.71E+05	2.60E+05	2.30E+05	2.54E+05	7%
M+P-XYLENES	3.11E+05	2.95E+05	2.67E+05	2.91E+05	6%
O-XYLENE	2.60E+05	2.58E+05	2.43E+05	2.54E+05	3%
1,3 DICHLOROBENZENE	3.32E+05	3.49E+05	3.03E+05	3.28E+05	6%
1,4 DICHLOROBENZENE	3.08E+05	3.07E+05	2.62E+05	2.93E+05	7%
1,2 DICHLOROBENZENE	2.91E+05	2.79E+05	2.55E+05	2.75E+05	5%

Daily Check Std A

Sample: PURGE 4+ 10PPB Channel: OI A Filename: STD0908A
Acquired: 08-SEP-87 8:00 Method: METHOD 601/602 Operator: SRS
Inj Vol: 5.00
Comments: 60m VOCOL Column



Sample: PURGE A+ 10PPB   Channel: FID A   Filename: STD0908A
Acquired: 08-SEP-87 8:00   Method: METHOD 601/602   Operator: SRS
Inj Vol: 5.00
Comments: 60m VOCOL Column



The Maxima Chromatography Workstation (c)1985 Dynamic Solutions Corporation

MAXIMA CONCENTRATION REPORT

Printed: 8-SEP-1987 9:50:31

SAMPLE: PURGE A+ 10PPB
#9 in Method: METHOD 601/602
Acquired: 8-SEP-1987 8:00
Rate: 3.846 points/sec
Duration: 28.500 minutes
Operator: SRS

Type: UNKN
Instrument: Chromatograph 1
Filename: ST0908A
Index: Disk

DETECTOR: OI A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name	% dif
1	1	3.649	BP	70820	1130326	0.57	EXT	AREA	104.99	Freon 12	5.0
2	4	4.520	PP	1287682	9495035	4.83	EXT	AREA	8.22	Freon 11	18
3	6	5.196	PP	2195226	15052158	7.65	EXT	AREA	9.69	1,1-DCE	3.0
4	7	5.893	PP	2663224	18781543	9.55	EXT	AREA	9.83	Methylene Cl	2.0
5	9	7.003	PB	1978305	17539812	8.92	EXT	AREA	8.99	1,1-DCA	10
6	11	8.407	BP	2651165	20427872	10.39	EXT	AREA	8.73	Chloroform	13
7	12	8.749	PP	2758655	25623732	13.03	EXT	AREA	85.34	Bromochloro Me	(surr)
8	14	9.629	PB	2326429	26885498	13.67	EXT	AREA	8.57	Carbon tet	14
9	18	11.466	BP	1762859	12607449	6.41	EXT	AREA	9.98	TCE	0.2
10	19	11.999	PB	1367644	12298367	6.25	EXT	AREA	10.01	1,2-DCPA	0
11	21	13.667	BB	267022	2209862	1.12	EXT	AREA	8.21	Chloroethylvinl	18
12	25	15.968	BP	1230248	8787922	4.47	EXT	AREA	9.68	1,1,2-TCA	3.0
13	26	16.523	PP	1765574	13611881	6.92	EXT	AREA	9.34	PCE	7.0
14	27	17.303	PB	750496	6370479	3.24	EXT	AREA	8.82	DibromochloroMe	11
15	29	19.067	BB	679843	5811547	2.96	EXT	AREA	10.33	Chlorobenzene	3.0
TOTALS				23775192	196633483				310.78		

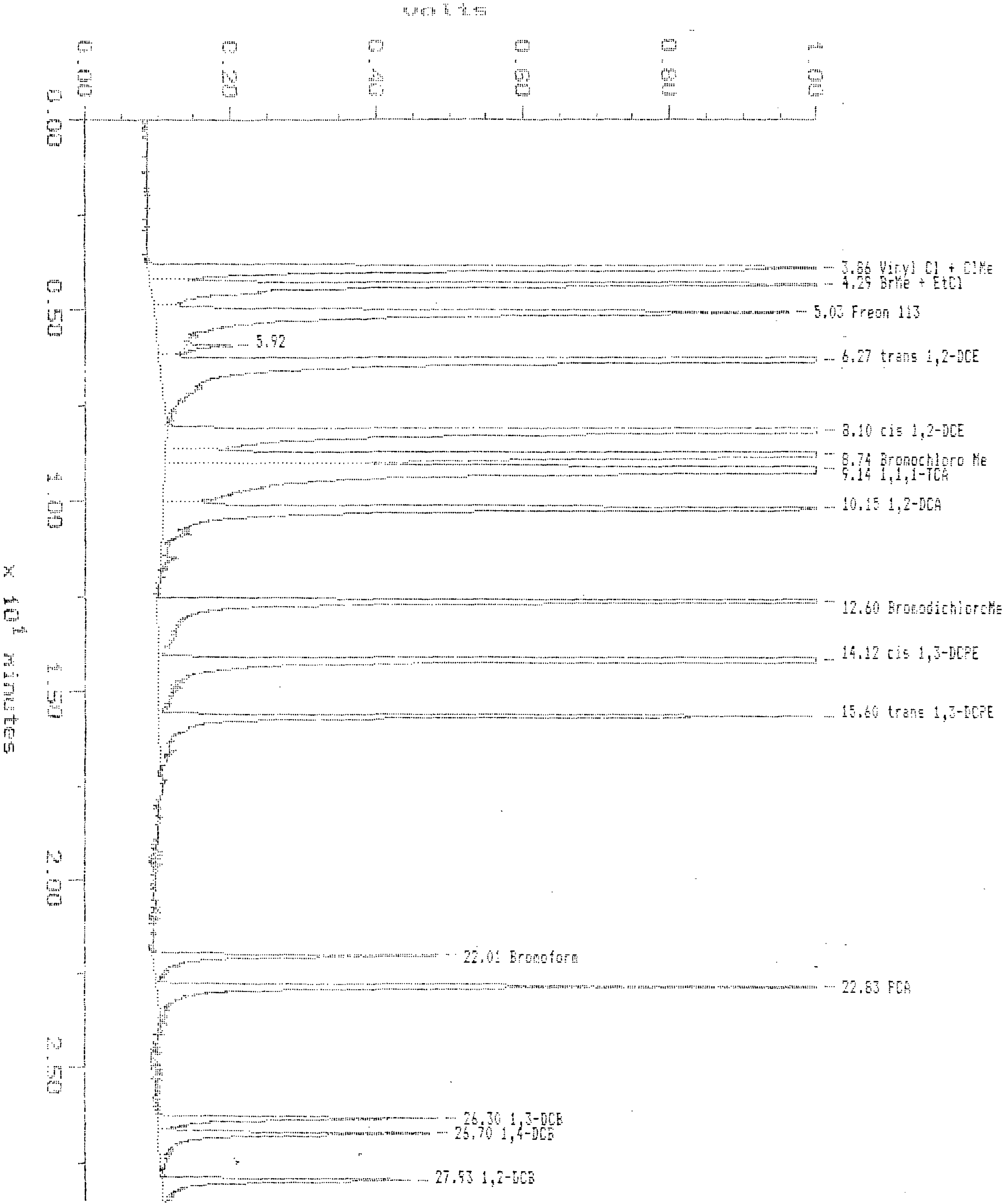
DETECTOR: FID A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name	% dif
1		5.174	BB	210756	924148	8.57					
2		9.052	BB	156145	2015190	18.68					
3	17	10.620	BB	184333	1177984	10.92	EXT	AREA	69.89	DFB (surr)	
4		11.444	BB	196232	1293452	11.99					
5		13.646	BB	94950	503803	4.67					
6	23	14.794	BB	47137	292888	2.71	EXT	AREA	~~Invalid~~	~~Toluene~~	
7		16.497	BB	163628	1153254	10.69					
8	28	19.036	BP	311682	2105476	19.52	EXT	AREA	8.45	Chlorobenzene F	15
9		19.517	PB	55337	324667	3.01					
10		21.818	BB	51035	516464	4.79					

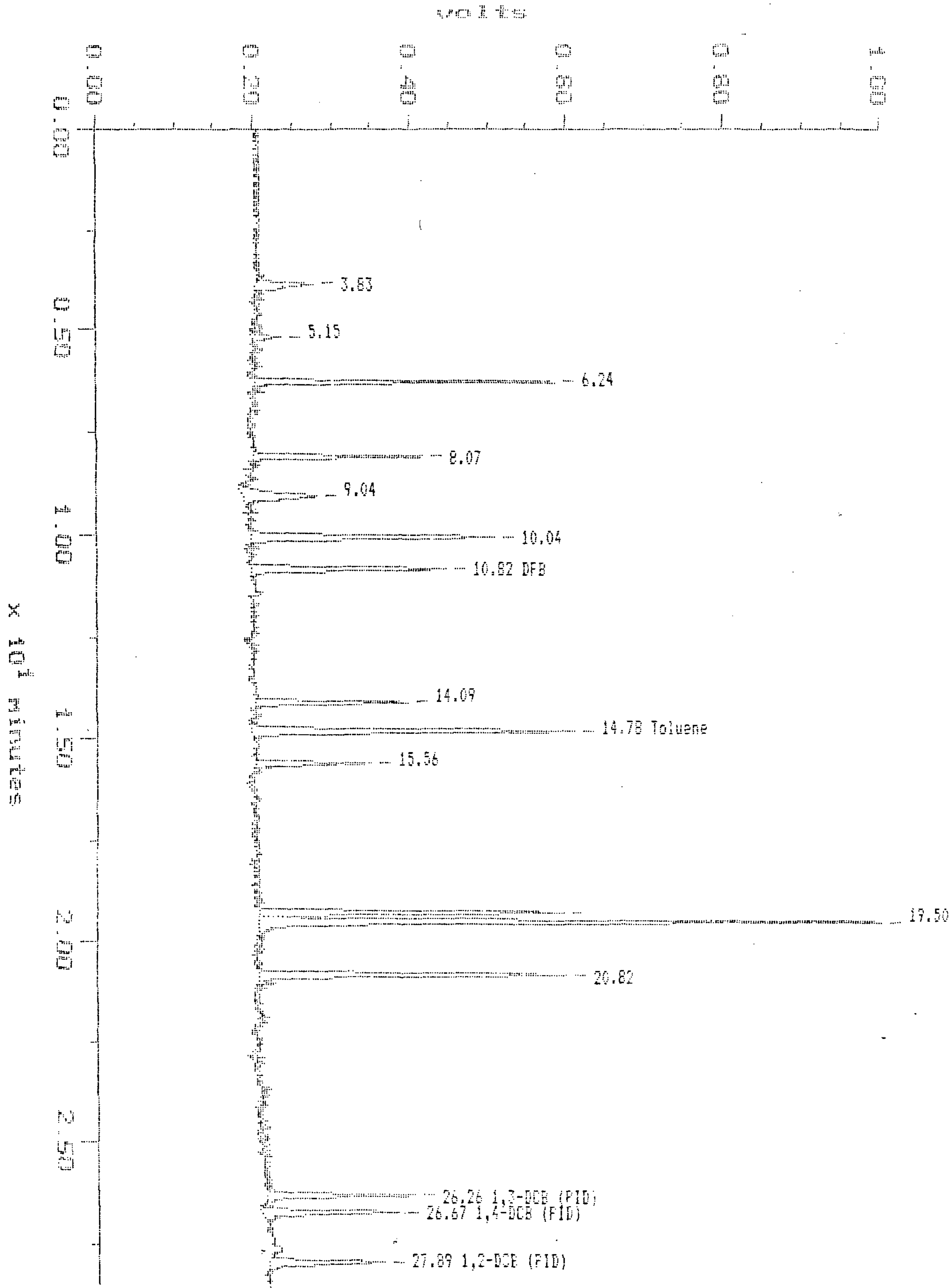
11	27.586	BB	47824	481094	4.46	
TOTALS			1519259	10788417		77.34

Daily Check Std B+C

Sample: PURGE B+C 10PPB Channel: GI A Filename: STD0908B
Acquired: 08-SEP-87 9:46 Method: METHOD 601/602 Operator: SRS
Inj Vol: 5.00
Comments: 60m VOCOL Column



Sample: PURGE B+C 10PPB   Channel: FID A   Filename: STD0908B
Acquired: 08-SEP-87 6:46.   Method: METHOD 601/602   Operator: SRS
Inj Vol: 5.00
Comments: 60m VOCOL Column



The Maxima Chromatography Workstation (c)1985 Dynamic Solutions Corporation

MAXIMA CONCENTRATION REPORT

Printed: 8-SEP-1987 10:06:12

SAMPLE: PURGE B+C 10PPB
#10 in Method: METHOD 601/602
Acquired: 8-SEP-1987 8:46
Rate: 3.846 points/sec
Duration: 28.500 minutes
Operator: SRS

Type: UNKN
Instrument: Chromatograph 1
Filename: STD0908B
Index: Disk

DETECTOR: 01 A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name	%d
1	2	3.861	BP	1208871	11565631	5.65	EXT	AREA	19.69	Vinyl Cl + ClMe	1.5
2	3	4.286	PP	2183243	13068429	6.38	EXT	AREA	21.43	BrMe + EtCl	7.
3	5	5.031	PP	866019	13954157	6.82	EXT	AREA	10.73	Freon 113	7.
4		5.915	SS	59773	411215	0.20					
5	8	6.266	PB	2889489	21668423	10.58	EXT	AREA	10.15	trans 1,2-DCE	1.5
6	10	8.103	BP	2669865	21340174	10.42	EXT	AREA	10.09	cis 1,2-DCE	0.
7	12	8.745	PP	3037807	22660968	11.07	EXT	AREA	75.47	Bromochloro Me (surr)	
8	13	9.143	PP	2488746	31042408	15.16	EXT	AREA	8.61	1,1,1-TCA	14
9	16	10.153	PB	1488758	13716288	6.70	EXT	AREA	10.50	1,2-DCA	5.
10	20	12.597	BP	1592624	12981279	6.34	EXT	AREA	10.25	BromodichloroMe	2.
11	22	14.118	PP	2115300	15822806	7.73	EXT	AREA	12.28	cis 1,3-DCPE	0.
12	24	15.600	PB	920781	7369697	3.60	EXT	AREA	7.26	trans 1,3-DCPE	6.4
13	33	22.009	BP	390190	3132615	1.53	EXT	AREA	9.84	Bromoform	1.6
14	34	22.828	PB	991968	7291451	3.56	EXT	AREA	9.44	PCA	5.
15	36	26.303	BP	381449	2643702	1.29	EXT	AREA	3.42	1,3-DCB	3.
16	38	26.702	PB	367751	3245432	1.59	EXT	AREA	3.72	1,4-DCB	13
17	40	27.928	BB	337302	2832884	1.38	EXT	AREA	3.47	1,2-DCB	5.2
TOTALS				23989936	204747559				226.33		

DETECTOR: FID A

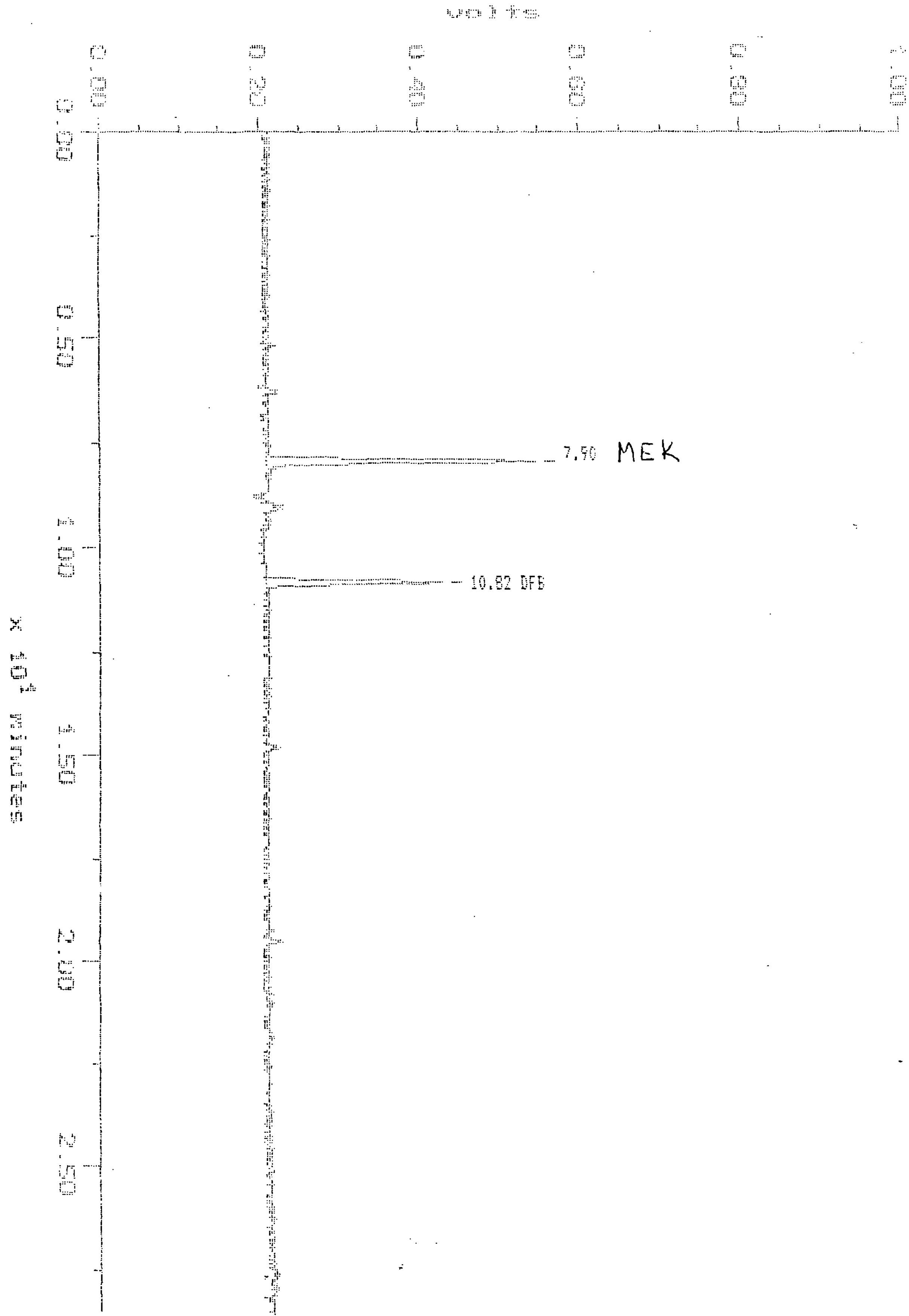
PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name
1		3.831	BB	71936	702936	2.48				
2		5.148	BB	38054	253652	0.89				
3		6.244	BB	384903	1929617	6.80				
4		8.073	BB	214934	1240058	4.37				
5		9.035	BB	94631	1122538	3.96				
6		10.036	BB	311110	2269876	8.00				
7	17	10.820	BB	249728	1730685	6.10	EXT	AREA	101.21	DFB (surr)
8		14.088	BB	193352	1170997	4.13				

9	23	14.761	BB	409089	2903605	10.23	EXT	AREA	10.80	Toluene	% d.A 8.0
10		15.557	BB	145333	861635	3.04					
11	30	19.270	BP	389595	2603225	9.17	EXT	AREA	10.64	Ethylbenzene	6.4
12		19.504	PB	811954	5610536	19.77					
13		20.817	BB	389263	2638372	9.30					
14	35	26.264	BB	187864	1164139	4.10	EXT	AREA	3.63	1,3-DCB (PID)	10
15	37	26.672	BB	172087	1133118	3.99	EXT	AREA	4.08	1,4-DCB (PID)	23
16	39	27.894	BB	146478	1038806	3.66	EXT	AREA	3.92	1,2-DCB (PID)	19
TOTALS				4210366	28373795				134.28		

Sample: MEK 250NG/UL
Acquired: 08-SEP-87 10:47
Dilution: 1 : 1.000
Comments: 60m VOCOL Column

Channel: FID A
Method: METHOD 601/602
Inj Vol: 5.00

Filename: STD0908D
Operator: SRS



The Maxima Chromatography Workstation (c)1985 Dynamic Solutions Corporation

MAXIMA CONCENTRATION REPORT

Printed: 8-SEP-1987 15:18:05

SAMPLE: MEK 250NG/UL
#14 in Method: METHOD 601/602
Acquired: 8-SEP-1987 10:47
Rate: 3.846 points/sec
Duration: 28.500 minutes
Operator: SRS

Type: UNKN
Instrument: Chromatograph 1
Filename: STD0908C
Index: Disk

Dilution: 1.000

DETECTOR: OI A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name
1	12	8.749	BB	2630526	23195880	100.00	EXT	AREA	77.25	Bromochloro Me
TOTALS				2630526	23195880				77.25	

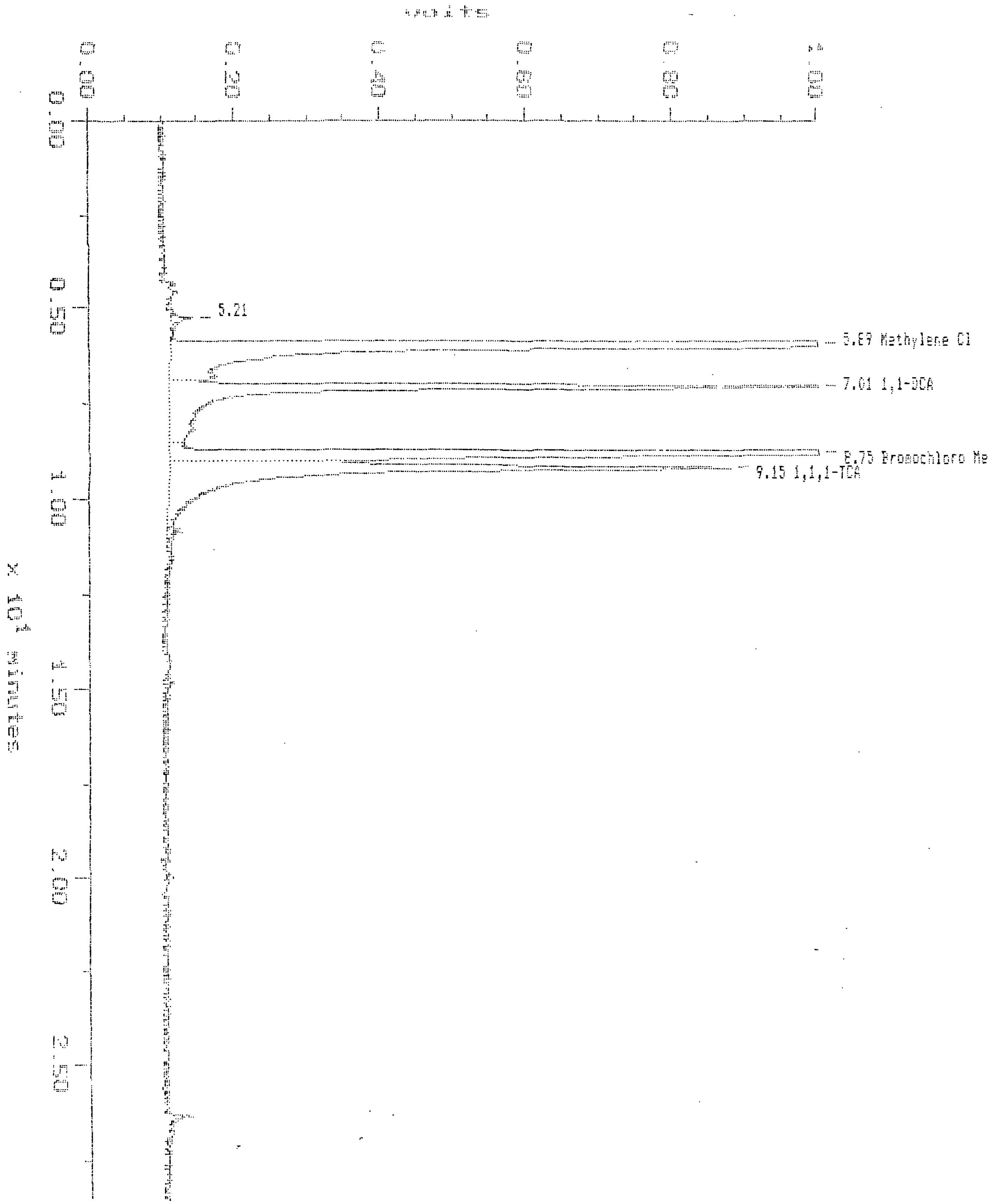
DETECTOR: PID A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name
1		7.904	BB	335900	2387956	61.71			250	MEK
2	17	10.820	BB	221763	1481468	38.29	EXT	AREA	86.64	DFB
TOTALS				557662	3869424				86.64	

Sample: 8708113-01
Acquired: 08-SEP-87 12:13
Dilution: 1 : 100.000
Comments: 60m VOCOL Column

Channel: DI A
Method: METHOD 601/602
Inj Vol: 5.00

Filename: 08113-1A
Operator: SRS



The Maxima Chromatography Workstation (c)1985 Dynamic Solutions Corporation

MAXIMA CONCENTRATION REPORT

Printed: 8-SEP-1987 15:12:30

SAMPLE: 8708113-01
#13 in Method: METHOD 601/602
Acquired: 8-SEP-1987 12:13
Rate: 3.846 points/sec
Duration: 28.500 minutes
Operator: SRS

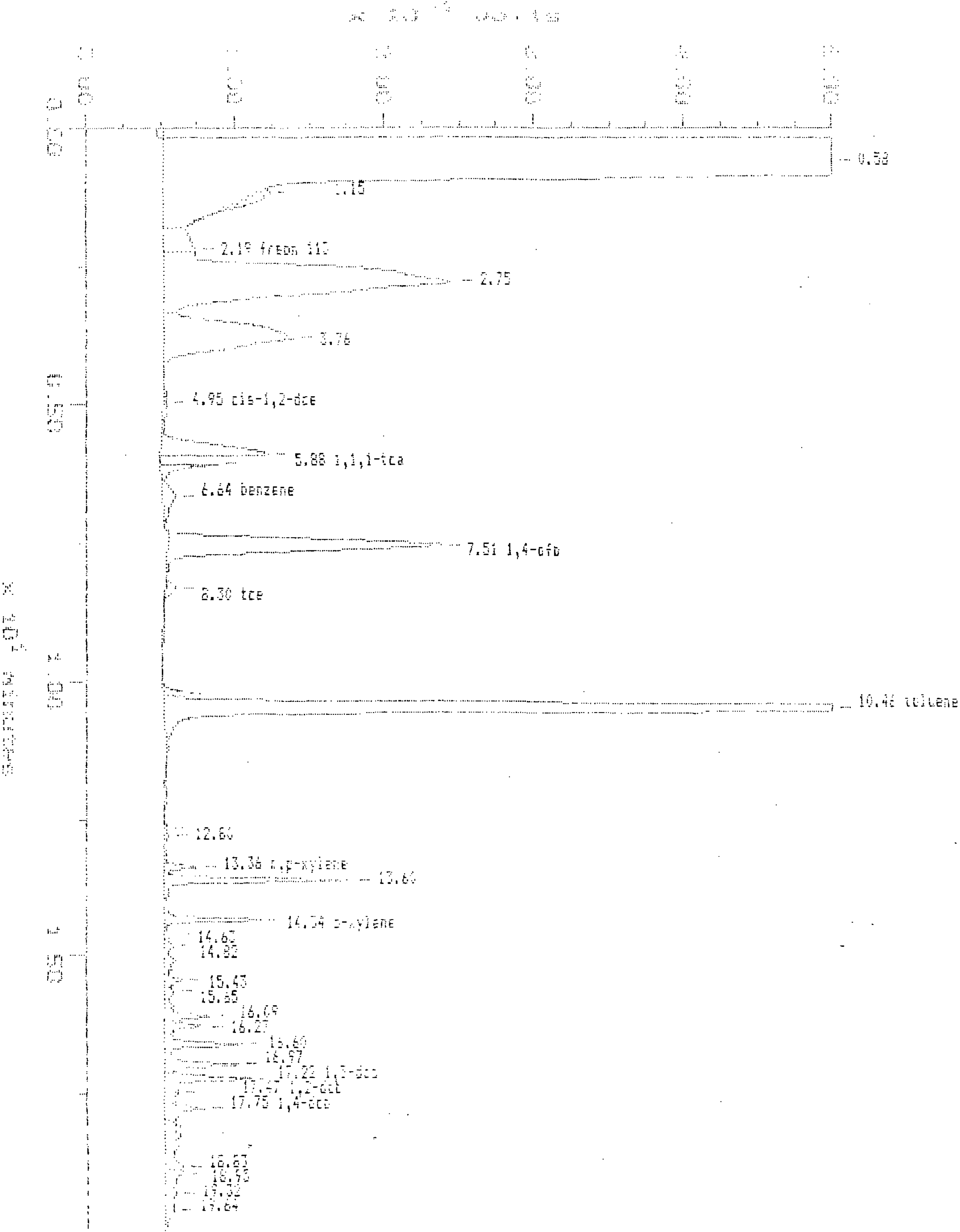
Type: UNKN
Instrument: Chromatograph 1
Filename: 08113-1A
Index: Disk

Dilution: 100.000

DETECTOR: 01 A

PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name
1		5.209	BB	28259	194189	0.25			0.13	1,1-DCE
2	7	5.893	BP	4839259	32192472	42.10	EXT	AREA	17.33	Methylene Cl
3	9	7.007	PP	1208519	12265130	16.04	EXT	AREA	6.32	1,1-DCA
4	12	8.753	PP	2600658	18449436	24.13	EXT	AREA	61.44	Bromochloro Me
5	13	9.152	PB	766243	13359954	17.47	EXT	AREA	1.99	1,1,1-TCA
TOTALS				9442937	76461181				87.08	

Sample: 870113-01 Channel: FID 1 Filename: 08132-01
Acquired: 01-SEP-87 17:10 Method: VOA SCREEN Operator: EJP
Inj Vol: 1.00



The Maxima Chromatography Workstation (c)1987 Dynamic Solutions Corporation

MAXIMA CONCENTRATION REPORT

Printed: 1-SEP-1987 20:54:43

SAMPLE: 8708113-01
#7 in Method: VOA SCREEN
Acquired: 1-SEP-1987 17:10
Rate: 4.000 points/sec
Duration: 20.000 minutes
Operator: EWB

Type: UNKN
Instrument: HP [illegible] DUAL FID
Filename: 08113-01
Index: Disk

DETECTOR: FID 1

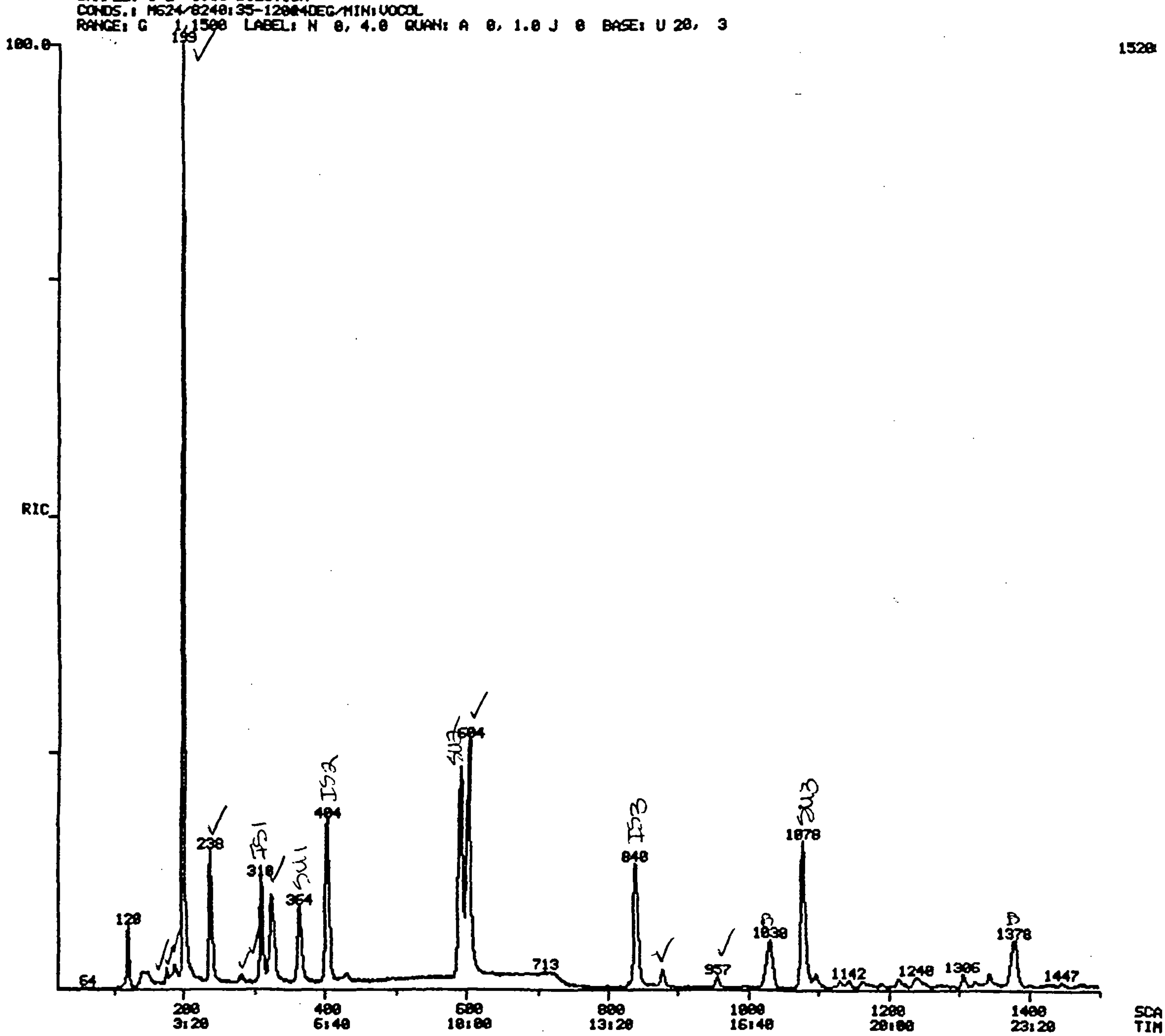
PK	ID	Retention Time (minutes)	Type	Peak Height (microvolts)	Peak Area (microvolt-sec)	Area Percent	Code	Base	Solution Conc	Component Name
1		0.575	IP	933102	39741637	60.08				
2		1.150	SS	6932	191916	0.29				
3	2	2.133	PP	20525	488452	0.74	EXT	AREA	211.96	freon 113
4		2.754	PP	193951	5986441	9.05				
5		3.763	PB	86229	2451746	3.71				
6	3	4.946	BP	2071	79396	0.12	EXT	AREA	39.43	cis-1,2-dce
7	4	5.879	PP	72011	866874	1.31	EXT	AREA	354.35	1,1,1-tca
8		6.342	PP	38535	216519	0.33				
9	5	6.638	PB	8333	217014	0.33	EXT	AREA	23.21	benzene
10	6	7.513	BB	182432	2611873	3.95	EXT	AREA	95.39	1,4-dfb
11	7	8.304	SS	5796	81185	0.12	EXT	AREA	34.81	tce
12		10.192	BP	12831	94610	0.14				
13	8	10.463	PB	933247	8860857	13.40	EXT	AREA	874.91	toluene
14		12.633	BP	630	-11271	-0.02				
15		12.796	PP	2062	16020	0.02				
16	10	13.363	PP	22194	136198	0.21	EXT	AREA	6.64	m,p-xylene
17		13.604	PP	124535	725454	1.10				
18	11	14.342	PP	64188	360044	0.54	EXT	AREA	36.74	o-xylene
19		14.629	PP	3659	33256	0.05				
20		14.817	PP	5326	58234	0.09				
21		15.429	PP	12057	195561	0.30				
22		15.646	PP	5282	57925	0.09				
23		16.088	PP	32267	250937	0.38				
24		16.267	PP	26854	173794	0.26				
25		16.600	PP	51950	346939	0.52				
26		16.967	PP	49203	325662	0.49				
27	12	17.217	PP	58737	487157	0.74	EXT	AREA	115.20	1,3-dcb
28	13	17.467	PP	2271	21249	0.03	EXT	AREA	5.04	1,2-dcb
29	14	17.754	PP	16485	230177	0.35	EXT	AREA	52.71	1,4-dcb
30		18.829	PP	11771	426472	0.64				
31		18.959	PP	12932	185723	0.28				
32		19.117	PP	7451	121720	0.18				
33		19.642	PB	6341	89295	0.14				

TOTALE	3024052	60144125	1251.02

RIC
09/10/87 23:36:00
SAMPLE: U-2 1:10 DILUTION
CONDS.: M624/8240:35-120@4DEG/MIN:VOCOL
RANGE: G 1,1500 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 1CU08113V01 #1
CALI: CALTAB #2

SCANS 20 TO 1500



S-CUBED DIAGNOSTICS

1CU08113V01
CALTAB
09/10/87
U-2 1:10 DILUTION
F1

NO	LIB	ID	M/E	SCAN	PRED	DELTA	FIT	PUR	MATCH	AREA
1	V2	(IS1	128	310	309	-1	982	721	92.	13457.
2	V2	CHLO	50	133	132	-1	765	33	45.	63.
**** WARNING: POSSIBLE INTERFERENCE AT QUANTITATION MASS # 2 ****										
				-139		-7	941	25	45.	
				-137		-5	781	27	40.	
3	V2	VINY	62	133	135	2	992	314	72.	520.
4	V2	BROM	94	143	146	3	884	81	51.	1827.
				-156		-10	805	79	37.	
				-140		6	566	46	30.	
5	V2	CHLO	64	148	148	0	992	219	71.	1577.
6	V2	TRIC	101	---	152	NO PEAKS FOUND				
7	V2	1,1-	96	175	175	0	994	553	100.	2490.
8	V2	TRIC	101	171	170	-1	413	31	27.	79.
				-173		-3	178	19	11.	
9	V2	ACET	43	188	187	-1	998	581	89.	10563.
10	V2	CARB	76	197	197	0	507	17	39.	72.
				-199		-2	508	1	33.	
				-201		-4	486	4	27.	
11	V2	METH	84	199	199	0	988	847	100.	153811.
12	V2	TRAN	96	211	211	0	983	156	85.	485.
13	V2	(1,1	63	238	238	0	997	676	100.	47996.
14	V2	2-BU	43	304	304	0	983	165	67.	1654.
				-311		-7	991	16	47.	
				-296		8	830	33	39.	
15	V2	CIS-	96	283	282	-1	911	461	82.	1294.
16	V2	CHLO	83	294	294	0	467	18	30.	307.
				-290		4	481	11	26.	
				-298		-4	462	15	25.	
17	V2	1,1,	97	325	325	0	998	678	100.	30377.
18	V2	CARB	117	338	345	7	688	39	33.	16.
				-336		9	727	42	31.	
19	V2	(SU1	65	364	363	-1	998	574	89.	21590.
20	V2	(IS2	114	404	402	-2	989	810	95.	66231.
21	V2	BENZ	78	367	368	1	806	148	95.	1798.
**** WARNING: POSSIBLE INTERFERENCE AT QUANTITATION MASS # 21 ****										
22	V2	1,2-	62	374	374	0	938	193	71.	668.
23	V2	TRIC	130	432	432	0	990	329	87.	1167.
24	V2	1,2-	63	461	461	0	572	58	45.	63.
				-459		2	574	55	39.	
				-465		-4	571	59	34.	
25	V2	BROM	83	493	491	-2	750	24	42.	146.
				-489		2	472	9	26.	
				-496		-5	474	10	24.	
26	V2	2-CH	63	551	552	1	659	223	62.	134.
				-553		-1	637	223	60.	
				-547		5	627	203	41.	
27	V2	VINY	43	247	246	-1	628	37	47.	126.
				-245		1	609	29	45.	
				-243		3	655	26	41.	
28	V2	TRAN	75	---	571	NO PEAKS FOUND				
29	V2	4-ME	43	600	603	3	526	109	34.	1344.
				-603		0	519	47	33	

30	V2	TOLU	92	603	605	2	993	651	95.	61466.
31	V2	(SU2	98	593	594	1	986	845	99.	90603.
32	V2	(IS3	117	840	838	-2	980	831	96.	43929.
33	V2	CIS-	75	655	651	-4	672	71	38.	31.
				-645		6	659	62	35.	
				-643		8	667	60	33.	
34	V2	1,1,	97	670	670	0	770	87	54.	460.
				-664		6	549	42	28.	
35	V2	TETR	164	---	693	NO PEAKS FOUND				
36	V2	2-HE	43	750	748	-2	547	105	36.	352.
				-745		3	551	93	34.	
				-753		-5	560	111	34.	
37	V2	DIBR	129	---	743	NO PEAKS FOUND				
38	V2	CHLO	112	---	847	NO PEAKS FOUND				
39	V2	ETHY	106	864	863	-1	993	296	77.	427.
				-862		1	981	247	74.	
40	V2	TOTA	106	878	877	-1	988	574	94.	3384.
41	V2	STYR	104	969	970	1	408	71	34.	59.
42	V2	BROM	173	---	1026	NO PEAKS FOUND				
43	V2	1,1,	83	1094	1085	-9	904	62	40.	403.
				-1086		-1	580	10	35.	
				-1088		-3	574	13	32.	
44	V2	1,3-	146	---	1287	NO PEAKS FOUND				
45	V2	1,4-	146	---	1313	NO PEAKS FOUND				
46	V2	1,2-	146	---	1381	NO PEAKS FOUND				
47	V2	(SU3	95	1078	1080	2	983	799	98.	34852.

QUANTITATION REPORT   FILE: 1CU08113V01

DATA: 1CU08113V01.TI
09/10/87 23:36:00
SAMPLE: U-2 1:10 DILUTION
SUBMITTED BY: WAHLER   ANALYST: ARL

AMOUNT=AREA * REF.AMNT/(REF.AREA)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME		
1	(IS1)		BROMOCHLOROMETHANE
2	(IS2)		1,4-DIFLUOROBENZENE
3	(IS3)		CHLOROBENZENE-D5
4	(SU1)	SURROGATE	D4-1,2-DICHLOROETHANE
5	(SU2)	SURROGATE	TOLUENE-D8
6	(SU3)	SURROGATE	P-BROMOFLUOROBENZENE
7	CHLOROMETHANE		
8	VINYL CHLORIDE		
9	BROMOMETHANE		
10	CHLOROETHANE		
11	TRICHLOROFLUOROMETHANE		
12	1,1-DICHLOROETHENE		
13	TRICHLOROTRIFLUOROETHANE		
14	ACETONE		
15	CARBONDISULFIDE		
16	METHYLENE CHLORIDE		
17	TRANS-1,2-DICHLOROETHENE		
18	(1,1)-DICHLOROETHANE		
19	2-BUTANONE		
20	CIS-1,2-DICHLOROETHENE		
21	CHLOROFORM		
22	1,1,1-TRICHLOROETHANE		
23	CARBON TETRACHLORIDE		
24	BENZENE		
25	1,2-DICHLOROETHANE		
26	TRICHLOROETHENE		
27	1,2-DICHLOROPROPANE		
28	BROMODICHLOROMETHANE		
29	2-CHLOROETHYLVINYL ETHER		
30	VINYL ACETATE		
31	TRANS-1,3-DICHLOROPROPENE		
32	4-METHYL-2-PENTANONE		
33	TOLUENE		
34	CIS-1,3-DICHLOROPROPENE		
35	1,1,2,-TRICHLOROETHANE		
36	TETRACHLOROETHENE		
37	2-HEXANONE		
38	DIBROMOCHLOROMETHANE		
39	CHLOROBENZENE		
40	ETHYLBENZENE		
41	TOTAL XYLENES		
42	STYRENE		
43	BROMOFORM		
44	1,1,2,2-TETRACHLOROETHANE		
45	1,3-DICHLOROBENZENE		
46	1,4-DICHLOROBENZENE		

NO	NAME
47	1,2-DICHLOROBENZENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT
1	128	310	5:10	1	1.000	A BB	13457.	50.000	UG/L	3.68
2	114	404	6:44	2	1.000	A BB	66231.	50.000	UG/L	3.68
3	117	840	14:00	3	1.000	A BB	43929.	50.000	UG/L	3.68
4	65	364	6:04	1	1.174	A BB	21589.	89.038	%	6.55
5	98	593	9:53	2	1.468	A BB	90603.	92.719	%	6.82
6	95	1078	17:58	3	1.283	A BB	34851.	93.870	%	6.91
7	50	133	2:13	1	0.429	A?BB	63.	0.293	UG/L	0.02
8	62	133	2:13	1	0.429	A BB	520.	2.329	UG/L	0.17
✓9	94	143	2:23	1	0.461	A?BV	1827.	4.741	UG/L	0.35
✓10	64	148	2:28	1	0.477	A BB	1577.	8.987	UG/L	0.66
11	NOT FOUND									
✓12	96	175	2:55	1	0.565	A BB	2490.	7.714	UG/L	0.57
13	101	171	2:51	1	0.552	A?BB	79.	0.152	UG/L	0.01
✓14	43	188	3:08	1	0.606	A BB	10563.	222.441	UG/L	16.37
15	76	197	3:17	1	0.635	A?BB	72.	0.122	UG/L	0.01
✓16	84	199	3:19	1	0.642	A BB	153811.	424.458	UG/L	31.23
17	96	211	3:31	1	0.681	A BB	485.	1.360	UG/L	0.10
✓18	63	238	3:58	1	0.768	A BB	47996.	78.366	UG/L	5.77
✓19	43	304	5:04	1	0.981	A?VB	1654.	18.393	UG/L	1.35
✓20	96	283	4:43	1	0.913	A BB	1294.	3.176	UG/L	0.23
21	83	294	4:54	1	0.948	A?BV	307.	0.483	UG/L	0.04
✓22	97	325	5:25	1	1.048	A BB	30377.	54.765	UG/L	4.03
23	117	338	5:38	1	1.090	A?BB	16.	0.031	UG/L	0.00
24	78	367	6:07	2	0.908	A?BB	1797.	1.834	UG/L	0.13
25	62	374	6:14	2	0.926	A BB	668.	1.701	UG/L	0.13
✓26	130	432	7:12	2	1.069	A BB	1167.	2.528	UG/L	0.19
27	63	461	7:41	2	1.141	A?BB	63.	0.147	UG/L	0.01
28	83	493	8:13	2	1.220	A?VB	146.	0.269	UG/L	0.02
29	63	551	9:11	2	1.364	A?BB	134.	0.481	UG/L	0.04
30	43	247	4:07	2	0.611	A?VB	126.	0.801	UG/L	0.06
31	NOT FOUND									
~~32~~	43	600	10:00	2	1.485	A?BV	1344.	6.104	UG/L	0.45
✓33	92	603	10:03	2	1.493	A BB	61466.	79.389	UG/L	5.84
34	75	655	10:55	3	0.780	A?BB	31.	0.098	UG/L	0.01
35	97	670	11:10	3	0.798	A?BB	460.	1.027	UG/L	0.08
36	NOT FOUND									
37	43	750	12:30	3	0.893	A?BV	352.	2.566	UG/L	0.19
38	NOT FOUND									
39	NOT FOUND									
~~40~~	106	864	14:24	3	1.029	A?BB	427.	1.135	UG/L	0.08
41	106	878	14:38	3	1.045	A BB	3384.	6.532	UG/L	0.48
42	104	969	16:09	3	1.154	A BB	59.	0.080	UG/L	0.01
43	NOT FOUND									
44	83	1094	18:14	3	1.302	A?BB	403.	0.902	UG/L	0.07
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

QUANTITATION REPORT   FILE: 1CU08113V01

DATA: 1CU08113V01.TI
09/10/87 23:36:00
SAMPLE: U-2 1:10 DILUTION
SUBMITTED BY: WAHLER   ANALYST: ARL

AMOUNT=AREA * REF.AMNT/(REF.AREA)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME		
1	(IS1)		BROMOCHLOROMETHANE
2	(IS2)		1,4-DIFLUOROBENZENE
3	(IS3)		CHLOROBENZENE-D5
4	(SU1)	SURROGATE	D4-1,2-DICHLOROETHANE
5	(SU2)	SURROGATE	TOLUENE-D8
6	(SU3)	SURROGATE	P-BROMOFLUOROBENZENE
7	VINYL CHLORIDE		
8	BROMOMETHANE		
9	CHLOROETHANE		
10	1,1-DICHLOROETHENE		
11	ACETONE		
12	METHYLENE CHLORIDE		
13	(1,1)-DICHLOROETHANE		
14	2-BUTANONE		
15	CIS-1,2-DICHLOROETHENE		
16	1,1,1-TRICHLOROETHANE		
17	BENZENE		
18	1,2-DICHLOROETHANE		
19	TRICHLOROETHENE		
20	4-METHYL-2-PENTANONE		
21	TOLUENE		
22	TOTAL XYLENES		

1:10 DILUTION

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT		%TOT	
1	128	310	5:10	1	1.000	A BB	13457.	50.000	UG/L	3.76	
2	114	404	6:44	2	1.000	A BB	66231.	50.000	UG/L	3.76	
3	117	840	14:00	3	1.000	A BB	43929.	50.000	UG/L	3.76	
4	65	364	6:04	1	1.174	A BB	21589.	89.038	%	6.69	
5	98	593	9:53	2	1.468	A BB	90603.	92.719	%	6.97	
6	95	1078	17:58	3	1.283	A BB	34851.	93.870	%	7.05	UH
~~7~~	~~62~~	~~133~~	~~2:13~~	~~1~~	~~0.429~~	~~A BB~~	~~520.~~	~~2.329~~	~~UG/L~~	~~0.17~~	
~~8~~	~~94~~	~~143~~	~~2:23~~	~~1~~	~~0.461~~	~~A?BV~~	~~1827.~~	~~4.741~~	~~UG/L~~	~~0.36~~	
9	64	148	2:28	1	0.477	A BB	1577.	8.987	UG/L	0.68	NET 9
10	96	175	2:55	1	0.565	A BB	2490.	7.714	UG/L	0.58	NET 7
11	43	188	3:08	1	0.606	QEDT	9590.	201.954	UG/L	15.17	NET 17
12	84	199	3:19	1	0.642	A BB	153811.	424.458	UG/L	31.89	NET 4
13	63	238	3:58	1	0.768	A BB	47996.	78.366	UG/L	5.89	NET 7
14	43	304	5:04	1	0.981	QEDT	1556.	17.304	UG/L	1.30	NET 17
15	96	283	4:43	1	0.913	A BB	1294.	3.176	UG/L	0.24	NET 3
16	97	325	5:25	1	1.048	A BB	30377.	54.765	UG/L	4.11	NET 5
~~17~~	~~78~~	~~367~~	~~6:07~~	~~2~~	~~0.908~~	~~A?BB~~	~~1797.~~	~~1.834~~	~~UG/L~~	~~0.14~~	
~~18~~	~~62~~	~~374~~	~~6:14~~	~~2~~	~~0.926~~	~~A BB~~	~~668.~~	~~1.701~~	~~UG/L~~	~~0.13~~	
19	130	432	7:12	2	1.069	A BB	1167.	2.528	UG/L	0.19	NET 25
~~20~~	~~43~~	~~600~~	~~10:00~~	~~2~~	~~1.485~~	~~A?BV~~	~~1344.~~	~~6.104~~	~~UG/L~~	~~0.46~~	
21	92	603	10:03	2	1.493	A BB	61466.	79.389	UG/L	5.96	NET 79
22	106	878	14:38	3	1.045	QEDT	5268.	10.169	UG/L	0.76	NET 1

0816 - 00027

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/30/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: G. Brock
Date of Analysis: 9/10/87
Method of Analysis: EPA 3510/8015
Detection Limit: 1.0
Units: ppm

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7082427	Paint Thinner	< 1.0	< 1.0	0.0

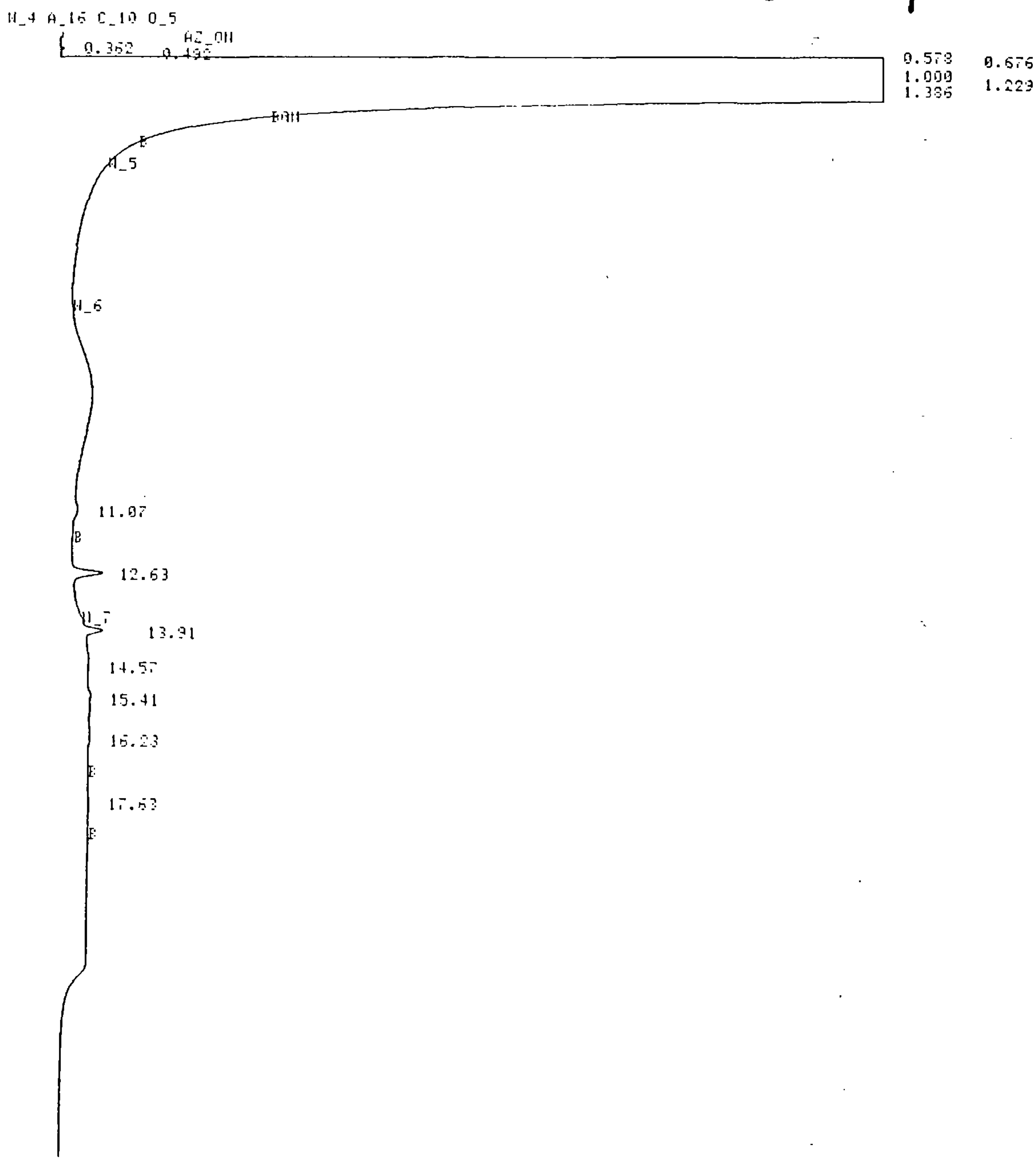
Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
-	Paint Thinner	D.I. Water	10	9.1	91

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

FILE 519 RUN 19 STARTED 19:18.0 80 02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80 02/17

3x HEX/ACETONE BLANK



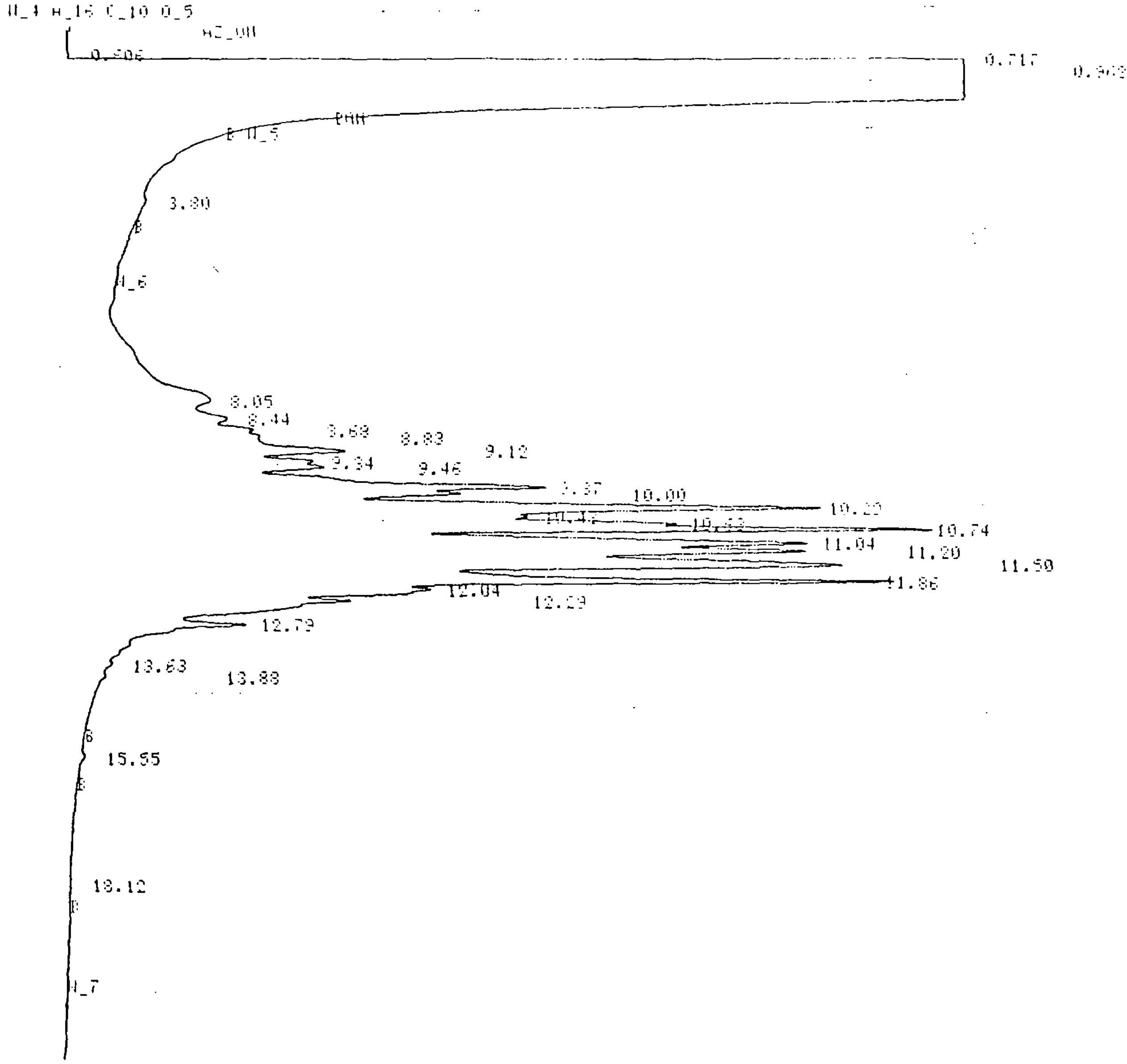
FILE 519 RUN 19 STARTED 19:18.0 80 02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80 02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
11.07	11874	0.6436		10.6597	5.9519
12.63	48773	5.5561	H	43.7912	51.3831
13.91	22944	3.3529	V	20.5965	31.0077
14.57	9545	0.3529	H	8.5693	3.2640
15.41	11855	0.6013	V	10.6432	5.5612
16.23	3353	0.1507		3.0093	1.3937
17.63	3039	0.1555		2.7263	1.4384

7 PEAKS > AREA REJECT 111337 TOTAL AREA
7 PEAKS > HEIGHT REJECT 10.8130 TOTAL HEIGHT

% METHOD 1 DIESELS/JETFUEL LAST EDITED 19:49. 80-02-19

3λ # 200ppm PAINT THINNER.

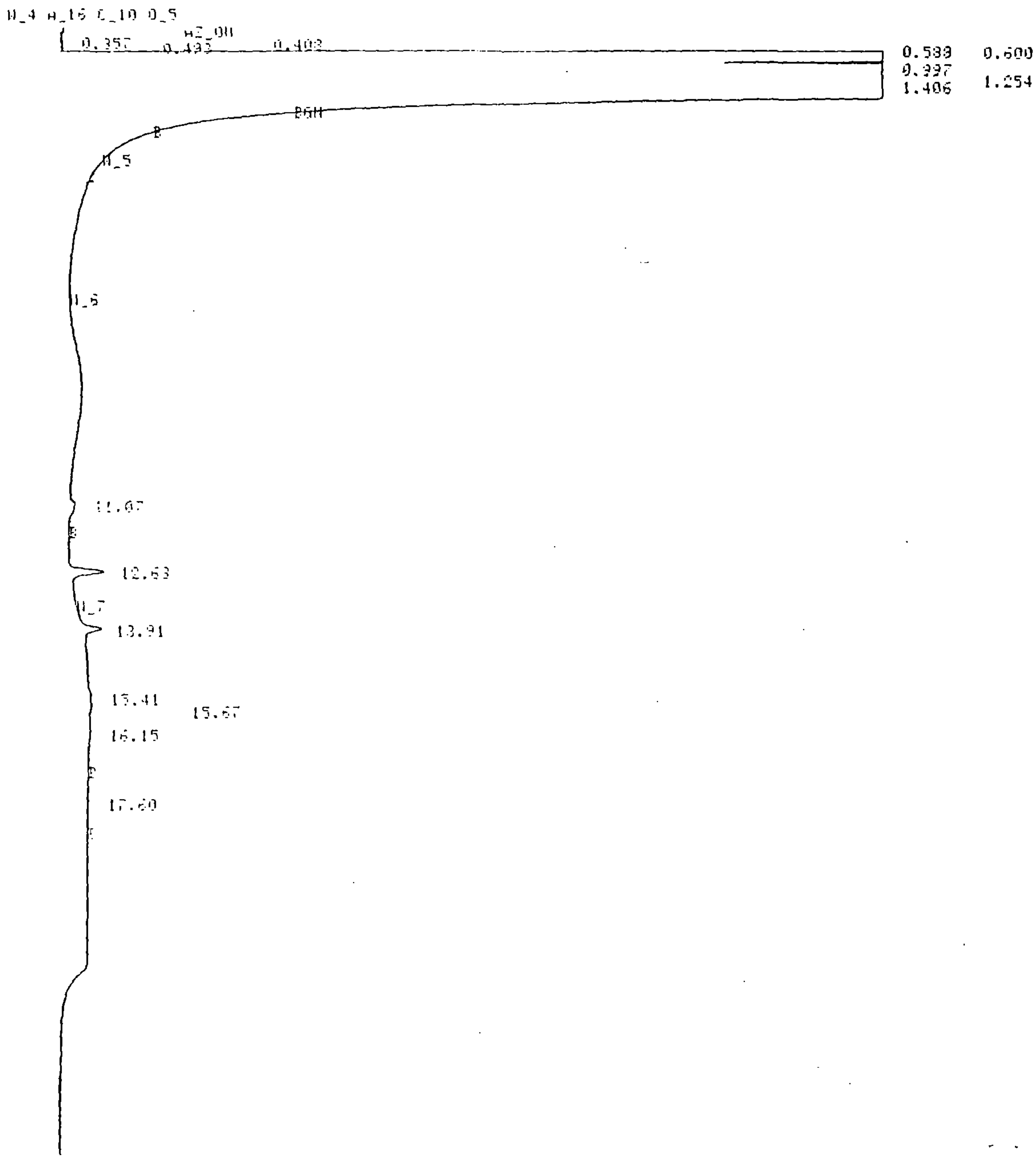


FILE 5 RUN 4 STARTED 21:53.3 80-02-19
% METHOD 1 DIESELS/JETFUEL LAST EDITED 19:49.? 80-02-19

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
3.80	16317	0.7515		0.0938	0.0532
8.05	860082	18.1209	T	4.9469	1.2822
8.44	344954	21.0761	T	1.9840	1.4913
8.58	260100	25.5263	T	1.4960	1.8062
8.83	241992	26.6949	T	1.3918	1.8889
9.12	703555	41.2071	T	4.0466	2.9228
9.34	287400	35.9997	T	1.6530	2.5473
9.46	379764	37.8248	T	2.1843	2.5764
9.87	1147407	75.2940	T	6.5995	5.3276
10.00	491663	61.1580	T	2.8279	4.3274
10.29	1704869	121.8544	T	9.8058	8.6243
10.48	344401	72.5855	T	1.9809	5.1360
10.63	700105	97.6724	T	4.0270	6.9112
10.74	1264262	141.0397	T	7.2750	9.9797
11.04	1468534	120.1113	T	8.4465	8.4993
11.20	1275333	119.7626	T	7.3354	8.4741
11.50	2017886	126.0067	T	11.6061	8.9160
11.86	1664900	134.9533	T	9.5759	9.5490
12.04	683213	57.1180	T	3.9296	4.0415
12.29	826841	43.7390	T	4.7557	3.0954
12.79	547927	26.2079	T	3.1515	1.8544
13.63	50305	4.1727	T	0.2893	0.2953
13.88	95568	3.3056		0.5497	0.2339
15.55	6230	0.7464		0.0359	0.0529
18.12	1986	0.1613		0.0114	0.0114

25 PEAKS AREA REJECT 17386333 TOTAL AREA
25 PEAKS HEIGHT REJECT 1413.2716 TOTAL HEIGHT

FILE 513   RUN 13   STARTED 06:53.9 80/02/19   DIESELS/JET FUEL 3λ # 7082427 (10:1)
% METHOD 1 DIESELS JET FUEL   LAST EDITED 00:45.2 80/02/17



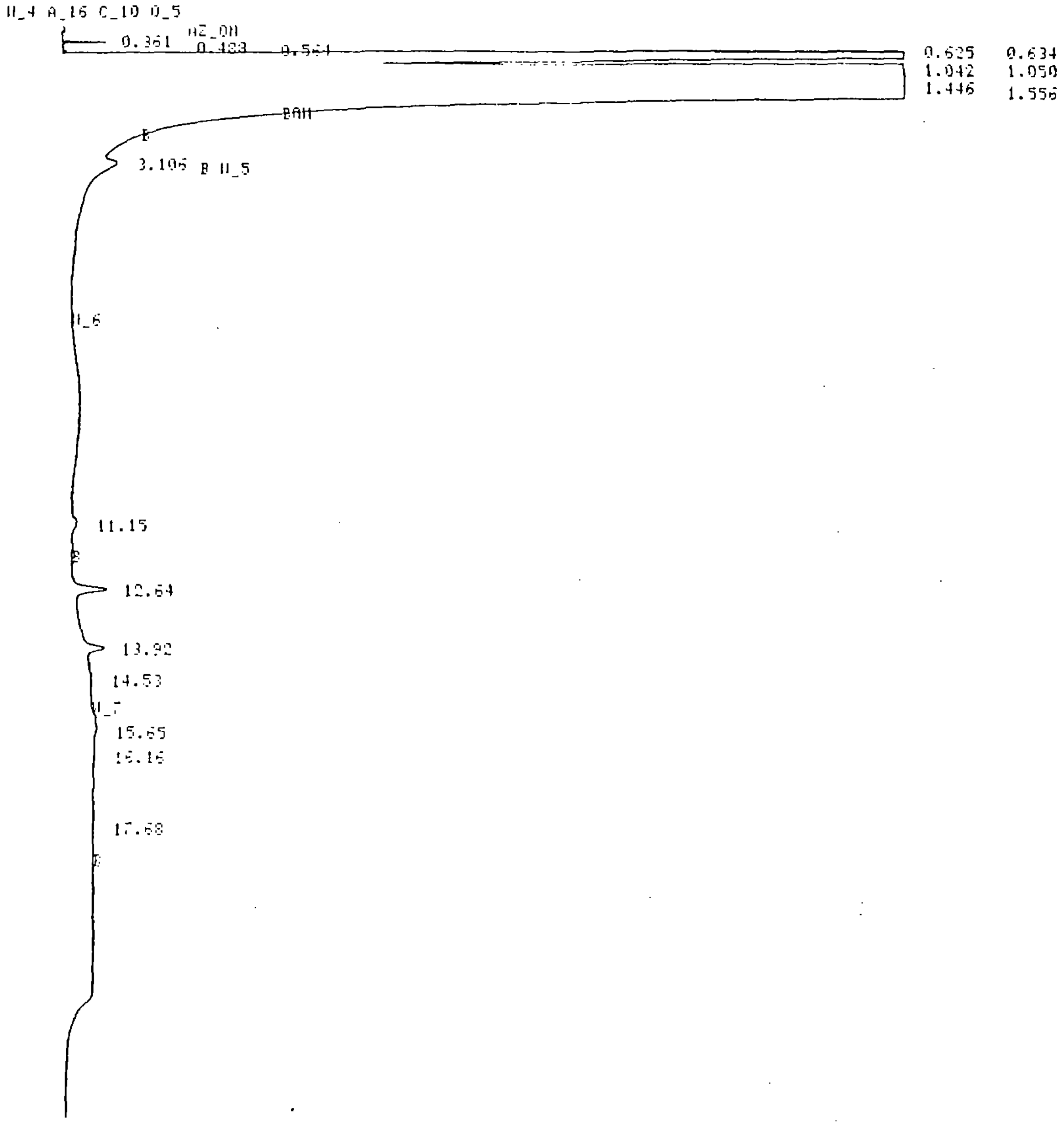
FILE 513   RUN 13   STARTED 06:53.9 80/02/19   DIESELS/JET FUEL
% METHOD 1 DIESELS JET FUEL   LAST EDITED 00:45.2 80/02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
11.07	17402	1.0777		16.6142	9.1098
12.63	50875	6.2408	U	48.5715	52.7525
13.91	23705	3.4669	U	22.6319	29.3047
15.41	3429	0.3839	U	3.2738	3.2446
15.67	3806	0.3319	U	3.6337	2.8053
16.15	2772	0.2096		2.6465	1.7714
17.60	2753	0.1197		2.6284	1.0116

7 PEAKS > AREA REJECT   104742 TOTAL AREA
7 PEAKS > HEIGHT REJECT   11.8304 TOTAL HEIGHT

8) # 7082428. (10:1)

FILE 514   RUN 14   STARTED 07:21.5 80/02/19   DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL   LAST EDITED 00:45.2 80 02/17



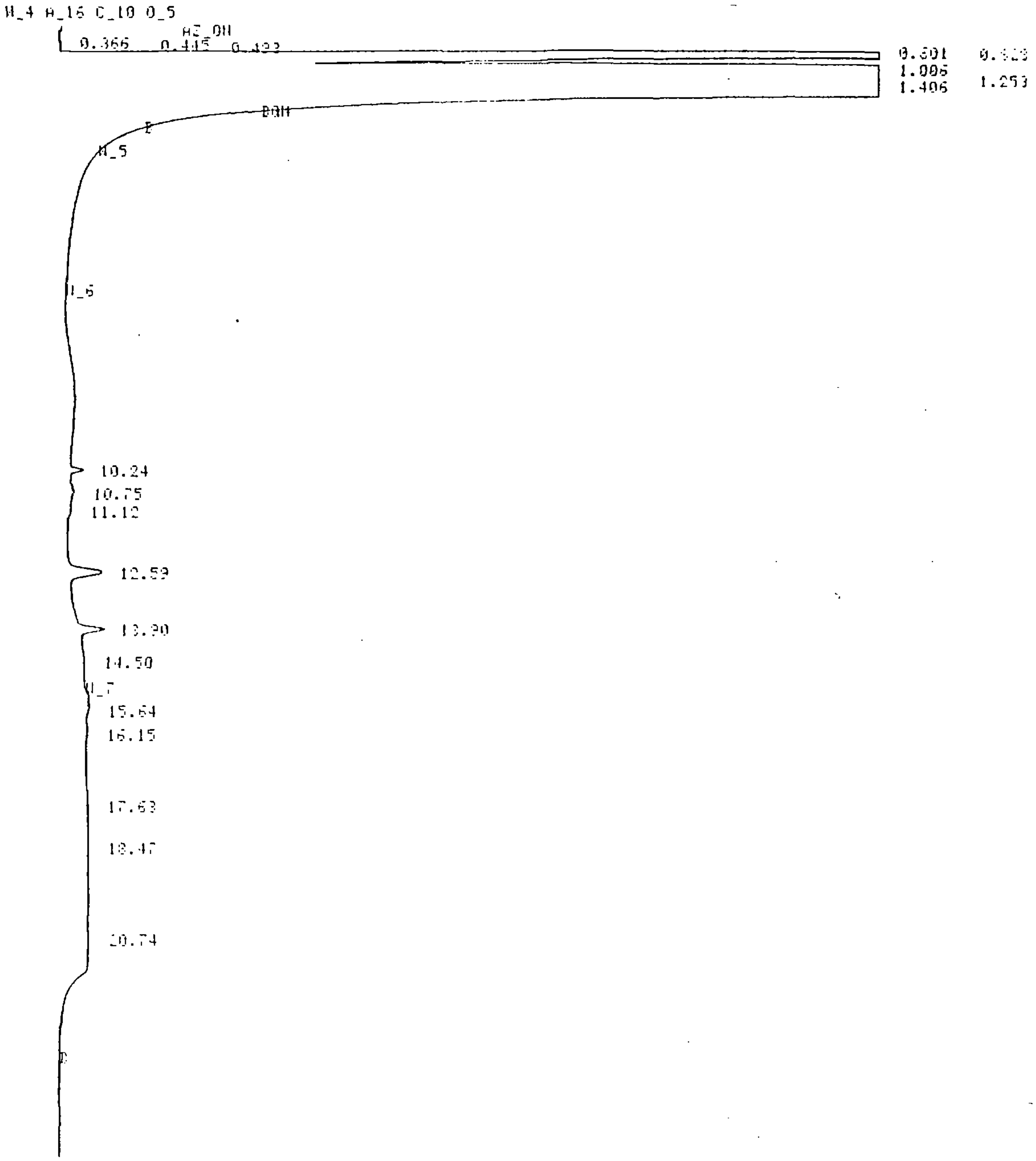
FILE 514   RUN 14   STARTED 07:21.5 80/02/19   DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL   LAST EDITED 00:45.2 80 02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
3.106	18335	1.9852		15.3874	15.0862
11.15	18751	0.9724		15.7336	7.3899
12.64	44547	5.6952	U	37.3795	43.2803
13.92	18159	3.3332	U	15.2373	25.3307
14.53	2205	0.1886	U	1.8502	1.4334
15.65	11837	0.6307	U	9.9323	4.7931
16.16	3586	0.2241	U	3.0030	1.7034
17.68	1693	0.1294		1.4202	0.9831

8 PEAKS > AREA REJECT   119175 TOTAL AREA
8 PEAKS > HEIGHT REJECT   13.1589 TOTAL HEIGHT

3λ 7b824-29 (10.1)

FILE 520 RUN 20 STARTED 19:57.9 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17



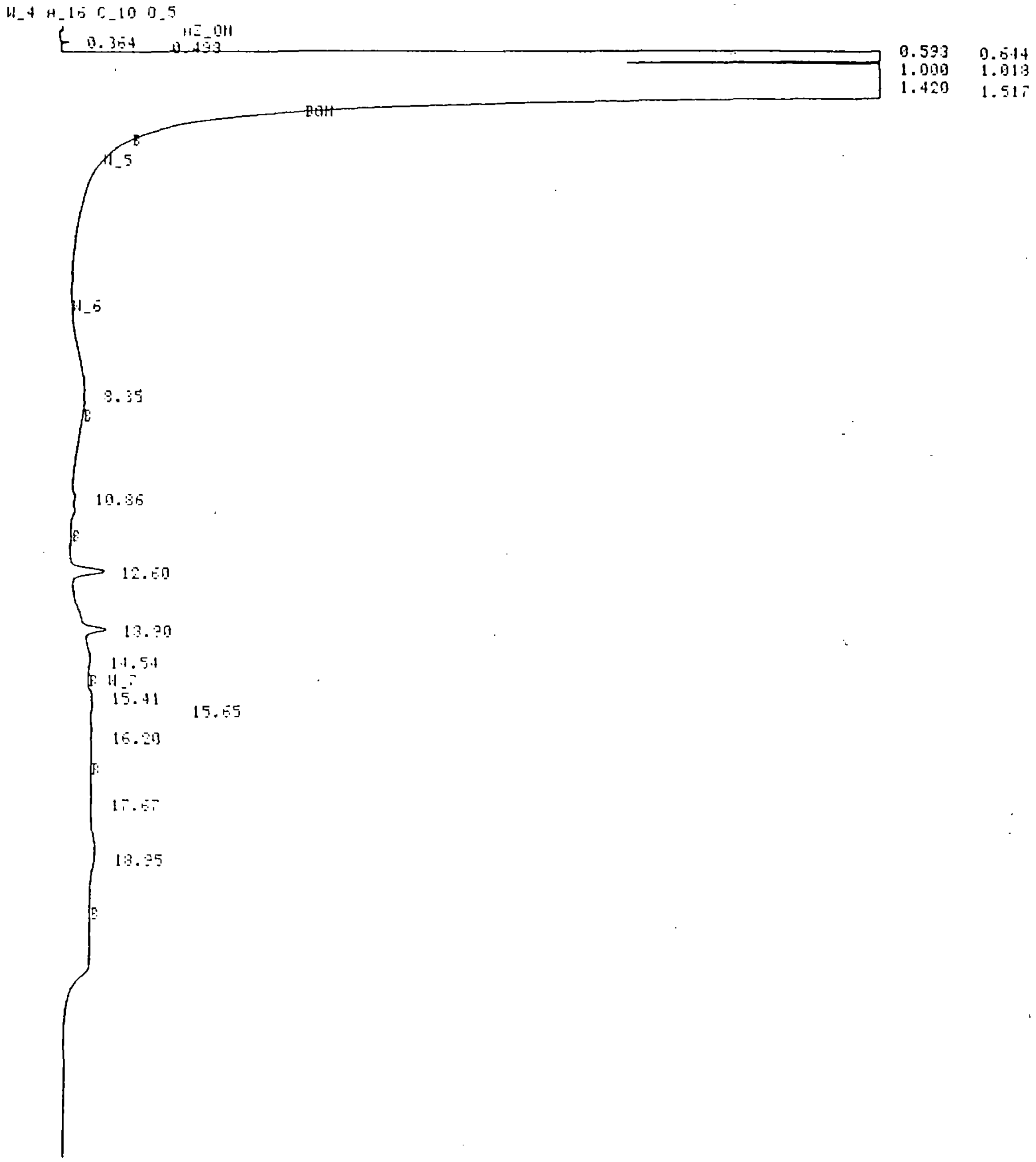
FILE 520 RUN 20 STARTED 19:57.9 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
10.24	15236	2.4315	V	8.0582	14.7014
10.75	10202	0.6712	V	5.3355	4.0583
11.12	649	0.1881	V	0.3430	1.1371
12.59	71899	6.1375	V	38.0269	37.1082
13.90	27365	4.5711	V	14.4732	27.6375
14.50	1534	0.1334	V	0.8204	1.1338
15.64	15298	0.7769	V	8.0907	4.6967
16.15	4418	0.3163	V	2.3525	1.9126
17.63	2140	0.1369	V	1.1319	0.8280
18.47	2433	0.0923	V	1.3130	0.5611
20.74	37673	1.0289		19.9247	6.2205

11 PEAKS > AREA REJECT 189071 TOTAL AREA
11 PEAKS > HEIGHT REJECT 16.5394 TOTAL HEIGHT

3 λ 708 2430 (1091)

FILE 521 RUN 21 STARTED 20:34.6 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17



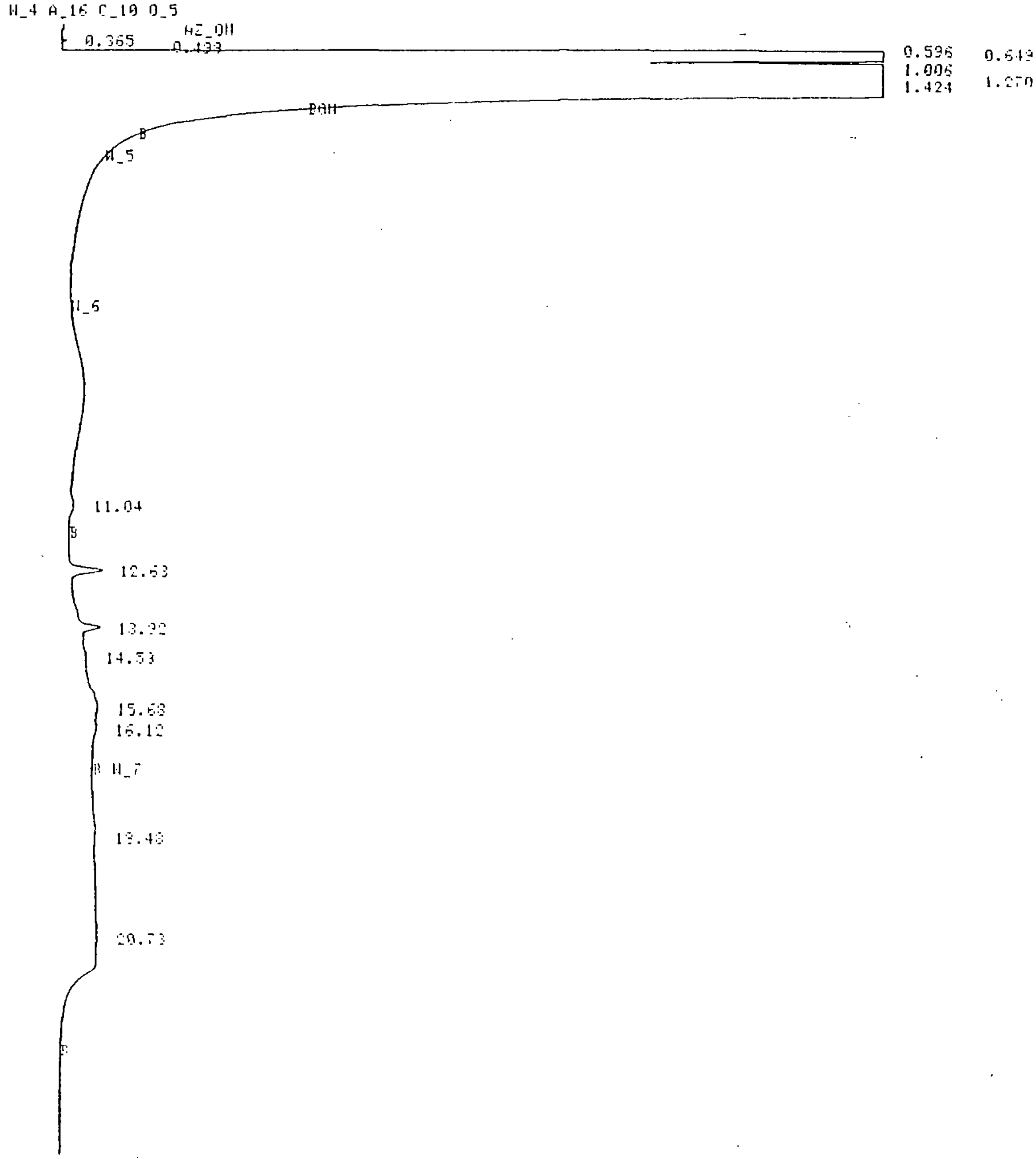
FILE 521 RUN 21 STARTED 20:34.6 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
8.35	21469	0.5015		10.7405	3.5890
10.86	14728	0.5901		7.3681	4.2228
12.60	63646	6.1061	V	31.8406	43.6955
13.90	26489	4.1270	V	13.2516	29.5328
14.54	16788	0.6549		8.3984	4.6863
15.41	4240	0.4700	V	2.1212	3.3632
15.65	2909	0.2760	V	1.4553	1.9754
16.20	6607	0.2667		3.3053	1.9084
17.67	2824	0.1420	V	1.4129	1.0159
18.95	40190	0.8400		20.1061	6.0107

10 PEAKS > AREA REJECT 199889 TOTAL AREA
10 PEAKS > HEIGHT REJECT 13.9743 TOTAL HEIGHT

3λ 708 2131 (10:1)

FILE 522 RUN 22 STARTED 21:06.9 80 02 19 DIESELS/JET FUEL
% METHOD 1 DIESELS JET FUEL LAST EDITED 00:45.2 80/02/17



FILE 522 RUN 22 STARTED 21:06.9 80 02 19 DIESELS JET FUEL
% METHOD 1 DIESELS JET FUEL LAST EDITED 00:45.2 80 02 17

RT	AREA	HEIGHT BC	AREA PERCENT	HEIGHT PERCENT
11.04	12108	0.6224	2.6550	4.2099
12.63	55533	6.0045 U	12.2083	40.5120
13.92	22699	3.5151 U	4.9775	23.7747
14.53	2523	0.2849 U	0.5542	1.9267
15.68	13650	0.7893 U	2.9932	5.3385
16.12	1267	0.3193	0.2778	2.1559
19.48	305	0.2919 U	0.0668	1.9745
20.73	247309	2.9522	54.2320	20.0078

8 PEAKS < AREA REJECT 456022 TOTAL AREA
9 PEAKS > HEIGHT REJECT 14.7992 TOTAL HEIGHT

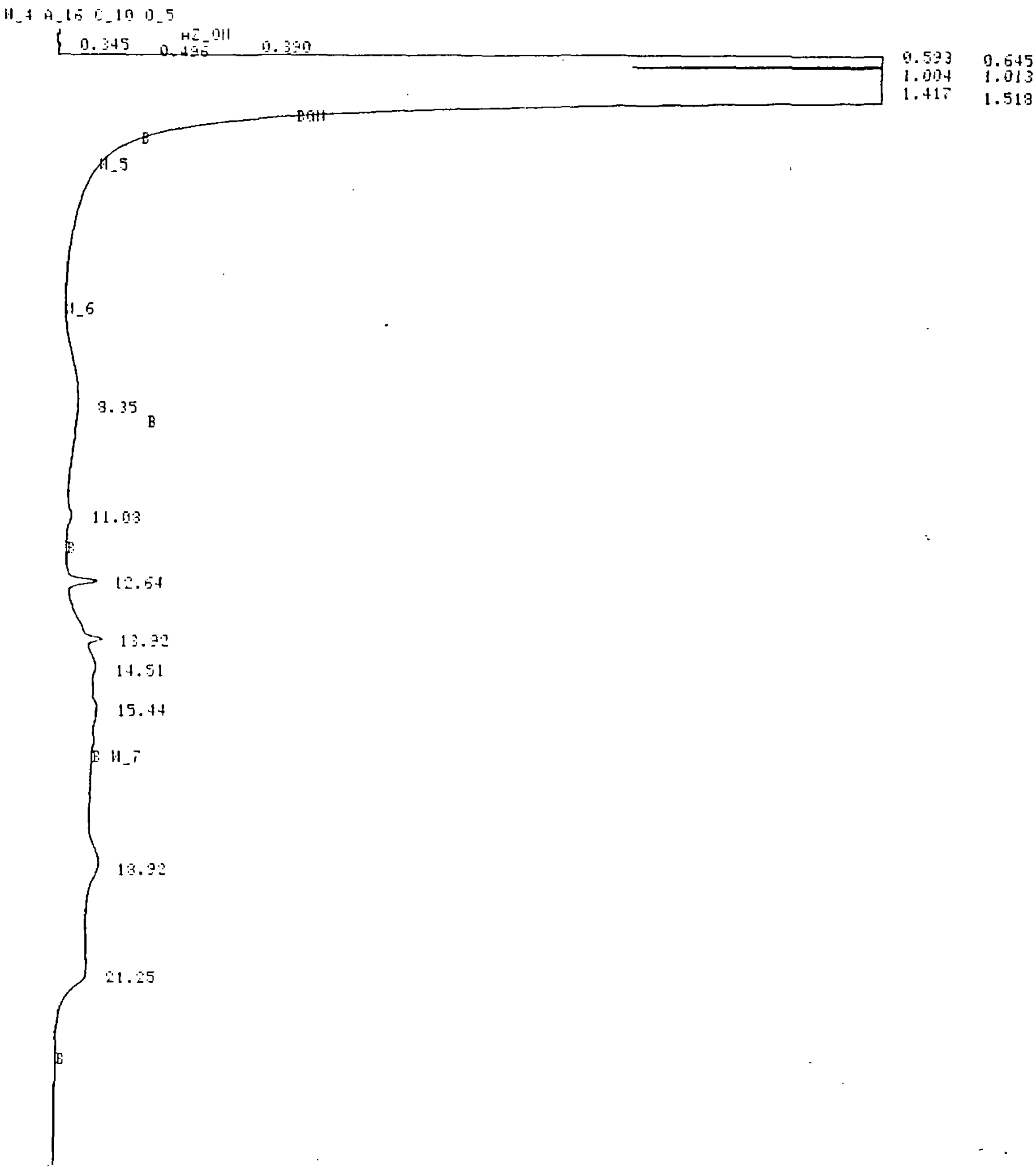
8.35	21462	[illegible]	[illegible]	[illegible]
10.35	14723	0.5301	7.3631	4.2228
12.60	63646	6.1051 U	31.8406	43.6955
13.90	26499	4.1270 U	13.2516	29.5328
14.54	16788	0.6549	8.3994	4.6663
15.41	4240	0.4700 U	2.1212	3.3632
15.65	2909	0.2760 U	1.4553	1.9754
16.20	6607	0.2667	3.3053	1.9034
17.67	2824	0.1420 U	1.4129	1.0158
[illegible]	[illegible]	[illegible]	[illegible]	6.0107

20.73	247009	2.9382	[illegible]	20.0078

8 PEAKS > AREA REJECT 456029 TOTAL AREA
8 PEAKS > HEIGHT REJECT 14.7852 TOTAL HEIGHT

3λ 7062432 (10:1)

FILE 523 RUN 23 STARTED 21:37.0 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17



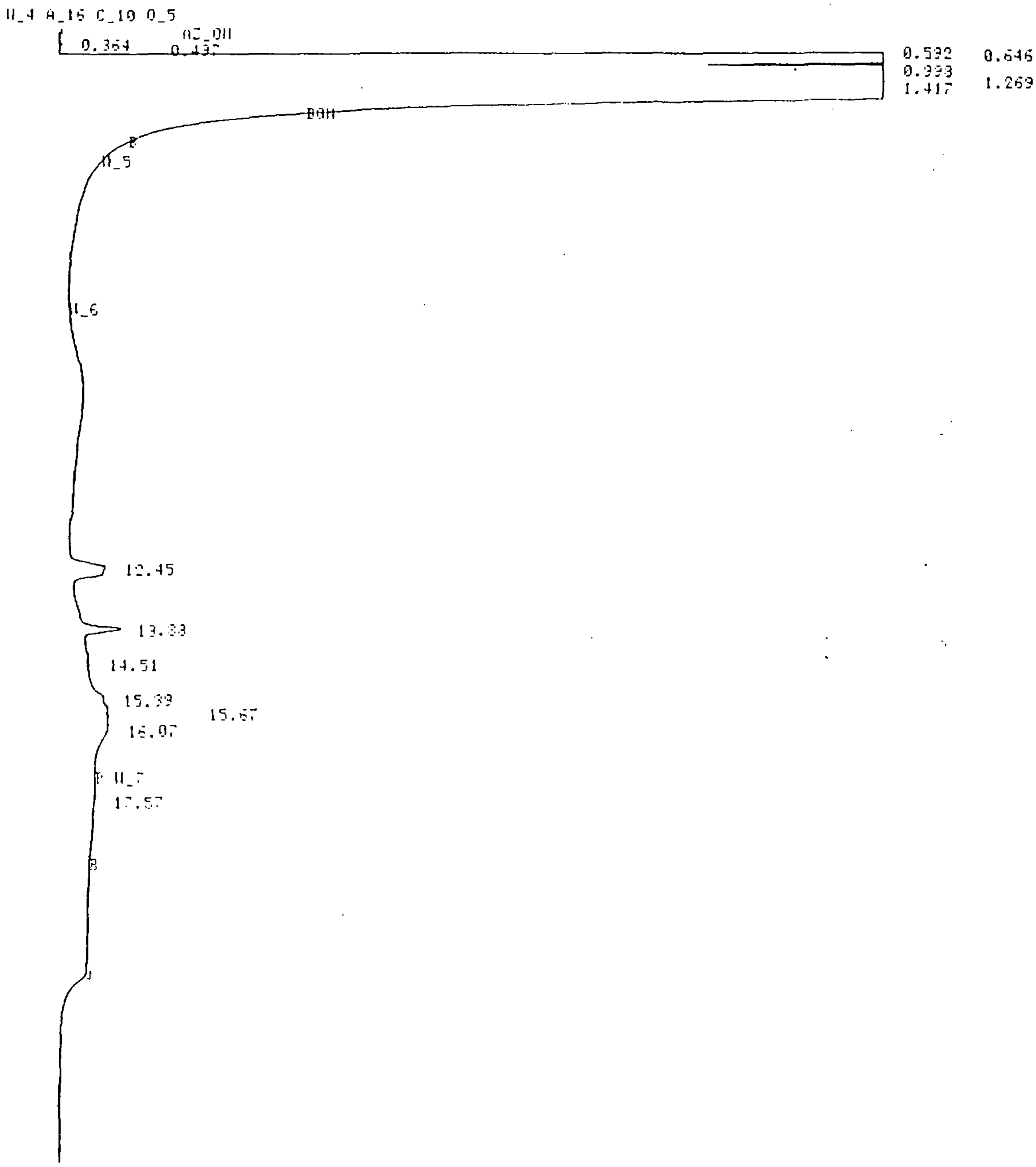
FILE 523 RUN 23 STARTED 21:37.0 80/02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80/02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
8.35	7987	0.2027		2.6167	1.3236
11.03	12717	0.6915		4.1762	4.5140
12.64	48814	5.3889	H	15.9926	35.1785
13.32	15603	2.9947	H	5.1135	19.5590
14.51	24719	1.0147	H	8.0966	6.6240
15.44	38633	0.9936		12.6537	6.5133
18.92	101738	2.1218	H	33.3218	13.8511
21.25	54962	1.9056		18.0063	12.4400

8 PEAKS > AREA REJECT 305229 TOTAL AREA
8 PEAKS > HEIGHT REJECT 15.3124 TOTAL HEIGHT

3λ 7082433 (10:1)

FILE 524 RUN 24 STARTED 22:39.5 80.02.19 DIESELS/JET FUEL
% METHOD 1 DIESELS/JET FUEL LAST EDITED 00:45.2 80.02.17



FILE 524 RUN 24 STARTED 22:39.5 80.02/19 DIESELS/JET FUEL
% METHOD 1 DIESELS JET FUEL LAST EDITED 00:45.2 80.02/17

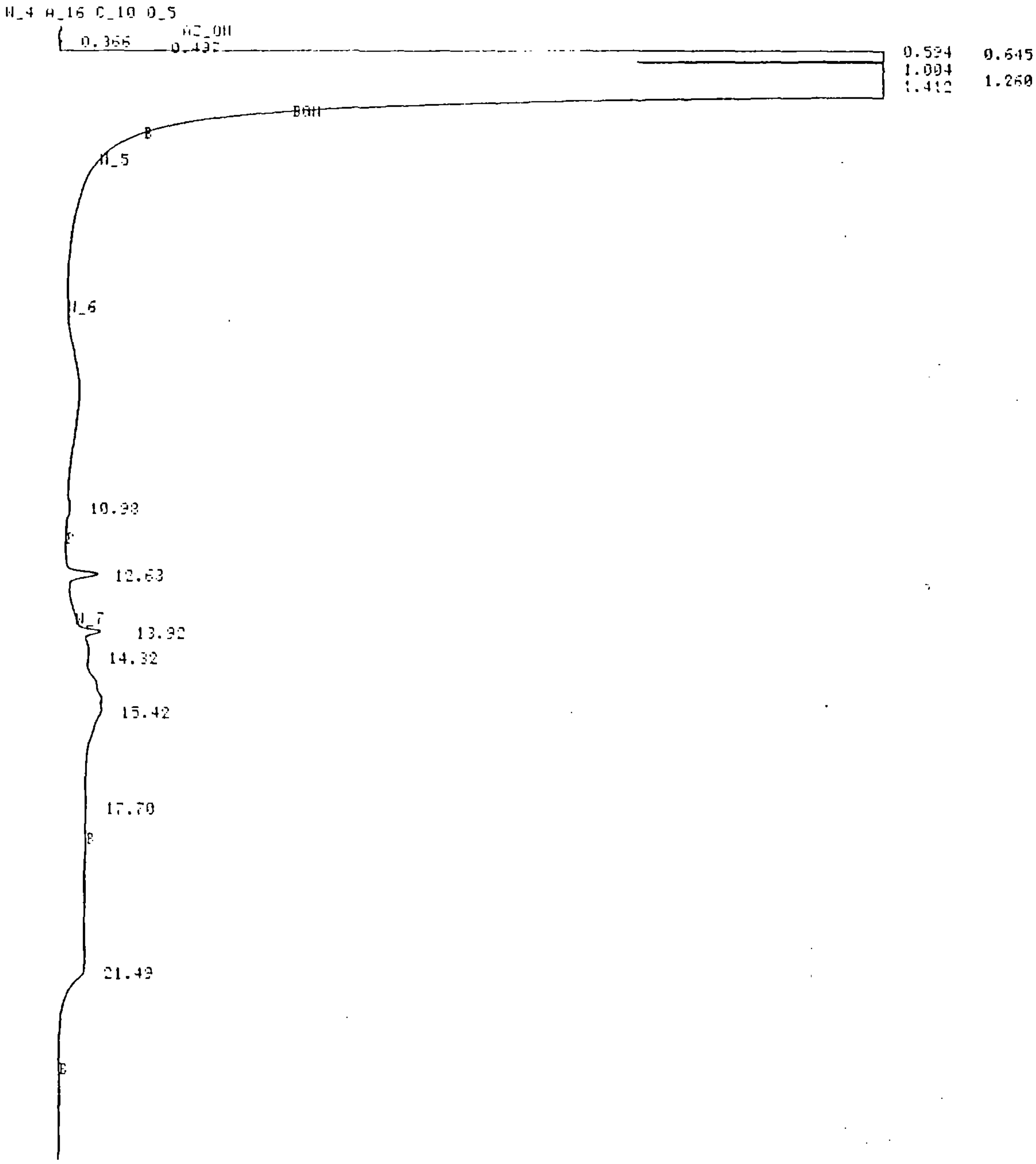
RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
12.45	123915	6.1659	U	62.4231	40.6998
13.89	54404	6.9750	U	27.4296	46.0406
14.51	2419	0.2244	U	1.2196	1.4815
15.39		0.4563	U		3.0116
15.67	9338	0.6572	U	4.7079	4.3379
16.07		0.4309			2.8442
17.57	8372	0.2400		4.2209	1.5844

5 PEAKS > AREA REJECT 198343 TOTAL AREA
7 PEAKS > HEIGHT REJECT 15.1497 TOTAL HEIGHT

7 PEAKS > HEIGHT REJECT 15.1497 TOTAL HEIGHT

3λ 708243A (10:1)

FILE 525 RUN 25 STARTED 23:12.4 80.02.19 DIESELS/JET FUEL
% METHOD 1 DIESELS JET FUEL LAST EDITED 00:45.2 80/02/17



FILE 525 RUN 25 STARTED 23:12.4 80.02.19 DIESELS/JET FUEL
% METHOD 1 DIESELS JET FUEL LAST EDITED 00:45.2 80/02/17

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
10.98	12095	0.5112		4.2466	3.6148
12.63	52322	5.5732	"	18.3010	39.4036
13.92	18591	3.2273	"	6.6810	22.5278
14.32	9873	0.4803	"	3.5173	3.3964
15.42	182203	2.8112	"	65.9402	19.8838
17.70	2174	0.1253		0.7717	0.8899
21.49		1.3121			9.2778

5 PEAKS > AREA REJECT 279252 TOTAL AREA
7 PEAKS > HEIGHT REJECT 14.1419 TOTAL HEIGHT

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/30/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: K. Keeley
Date of Analysis: 9/10-11/87
Method of Analysis: EPA 601/602
Detection Limit: 0.5
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7082433	1,1-DCA	26	24	4

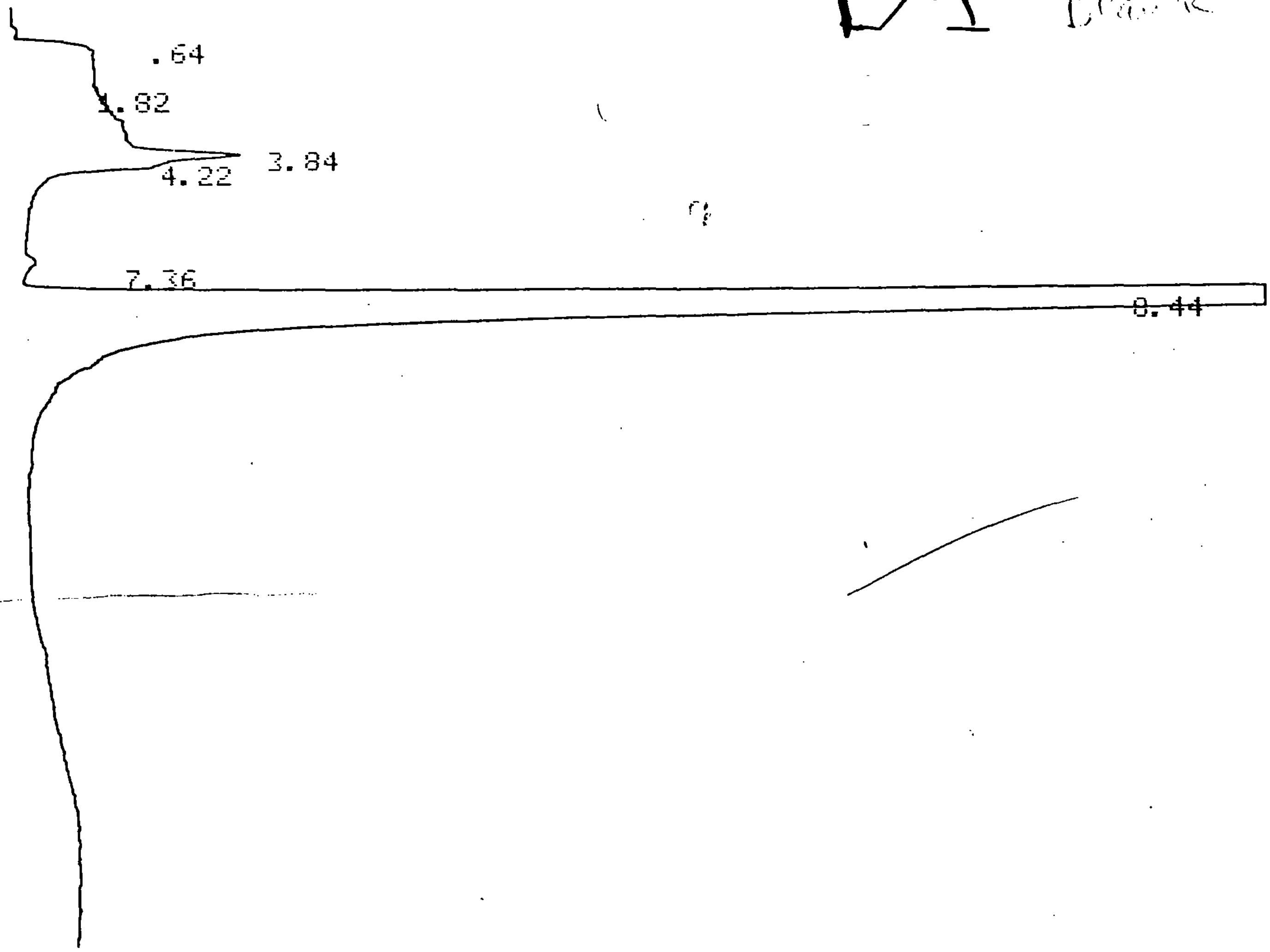
Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7082437	TCE	< 0.5	1.0	0.99	99

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

CHANNEL A INJECT 09/09/87 20:33:56

DI Blank



HALL 09/09/87 20:33:56 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 579 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	8294	02	
2	0.	1.82	1659105	02	
3	0.	3.84	1215582	02	
4	0.	4.22	1644324	03	
5	0.	7.36	38477	01	
6	0.	8.44	28192190	01	
TOTALS	0.		32757972		

INPUT OVERRANGE AT RT= 4.73

PID 09/09/87 20:33:56 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 553 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	8294	02	
2	0.	1.82	1659105	02	
3	0.	3.84	1215582	02	
4	0.	4.22	1644324	03	
5	0.	7.36	38477	01	
6	0.	8.44	28192190	01	
TOTALS	0.		32757972		

Blank

INPUT OVERRANGE AT RT= 4.73

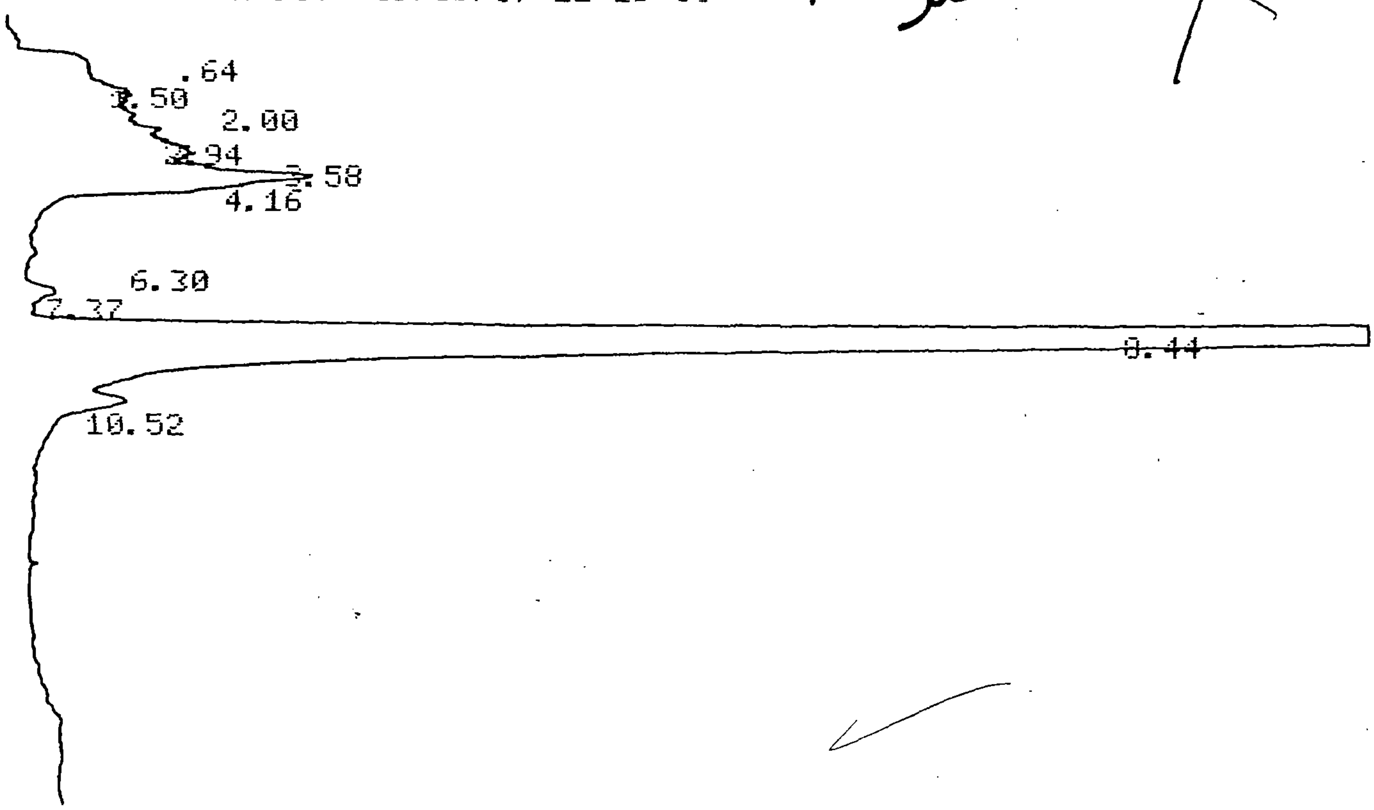
PID 09/09/87 20:33:56 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 553 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.39	293652	01	
2	0.	22.19	2715154	02	
3	0.	27.31	553483	02	
4	0.	30.56	4367880	03	
TOTALS	0.		7930169		

CHANNEL A INJECT 09/09/87 21:19:08 100 µl ~~7082432~~

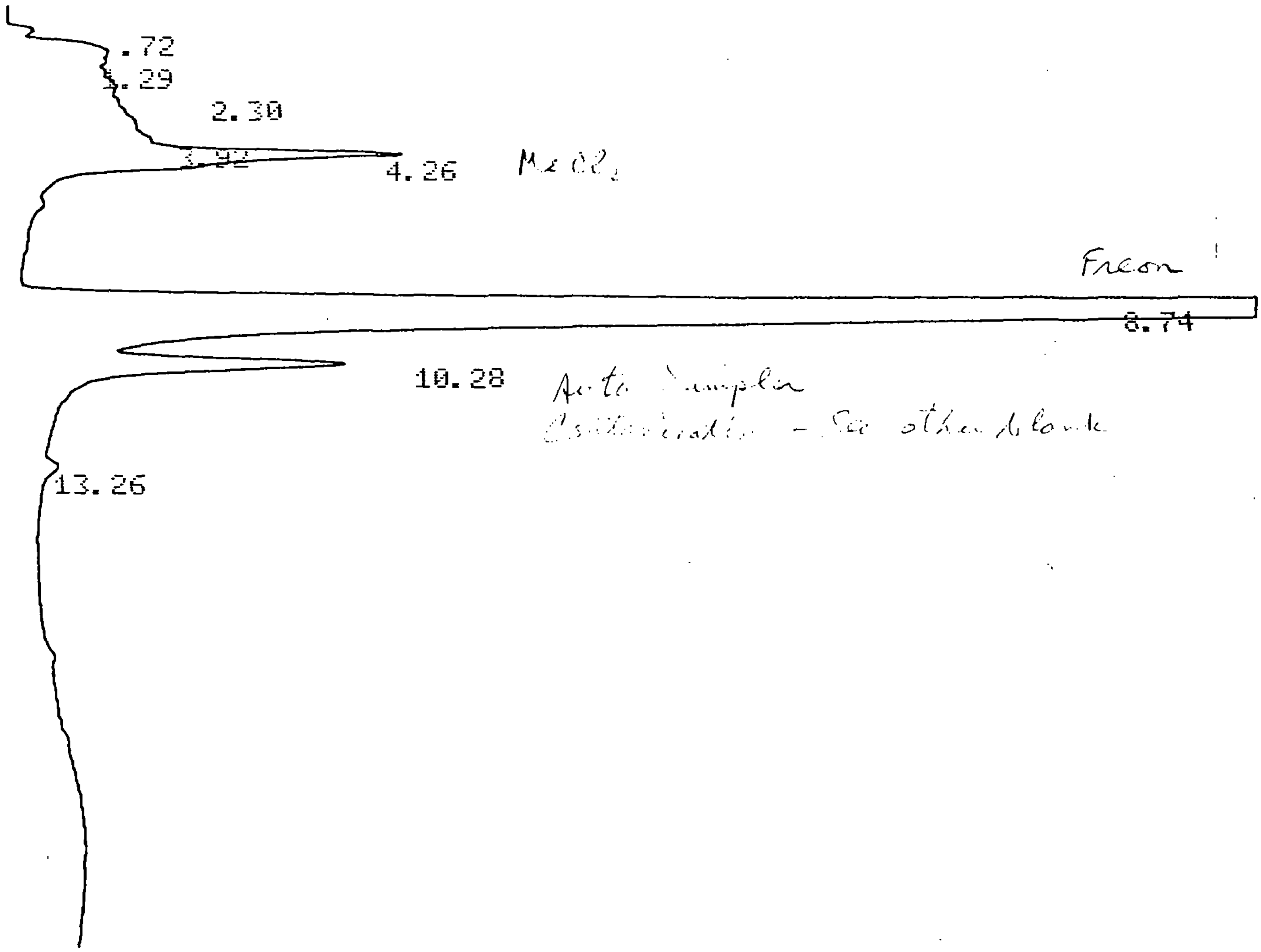


5	0.	19.85	113115	01
6	0.	22.75	676306	01

TOTALS 0. 1547502

Blank

CHANNEL A INJECT 09/10/87 06:35:38



082

HALL 09/10/87 06:35:38 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 593 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.72	43291	02	
2	0.	1.29	402641	03	
3	0.	2.3	653331	02	
4	0.	3.92	200216	02	
5	0.	4.26	1900987	03	
6	0.	8.74	24056260	02	
7	0.	10.28	1655924	03	
8	0.	13.26	60237	01	

TOTALS 0. 28972887

HALL 09/10/87 06:35:38 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 593 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	0.72	43291 02	
2	0.	1.29	402641 03	
3	0.	2.3	653331 02	
4	0.	3.92	200216 02	
5	0.	4.26	1900987 03	
6	0.	8.74	24056260 02	
7	0.	10.28	1655924 03	
8	0.	13.26	60237 01	
TOTALS	0.		28972887	

Blank

NPUT OVERRANGE AT RT= 4.79

ID 09/10/87 06:35:38 CH= "B" PS= 1.

ILE 1. METHOD 5. RUN 567 INDEX 1

NALYST: KWK

AME	PPB	RT	AREA BC	RF
1	0.	9.38	156007 01	
OTALS	0.		156007	

HANNEL A INJECT 09/10/87 07:43:39

ALL 09/10/87 07:43:39 CH= "A" PS= 1.

ILE 1. METHOD 5. RUN 594 INDEX 1

NALYST: KWK

AME	PPB	RT	AREA BC	RF
TALS	0.			

D 09/10/87 07:43:39 CH= "B" PS= 1.

LE 1. METHOD 5. RUN 568 INDEX 1

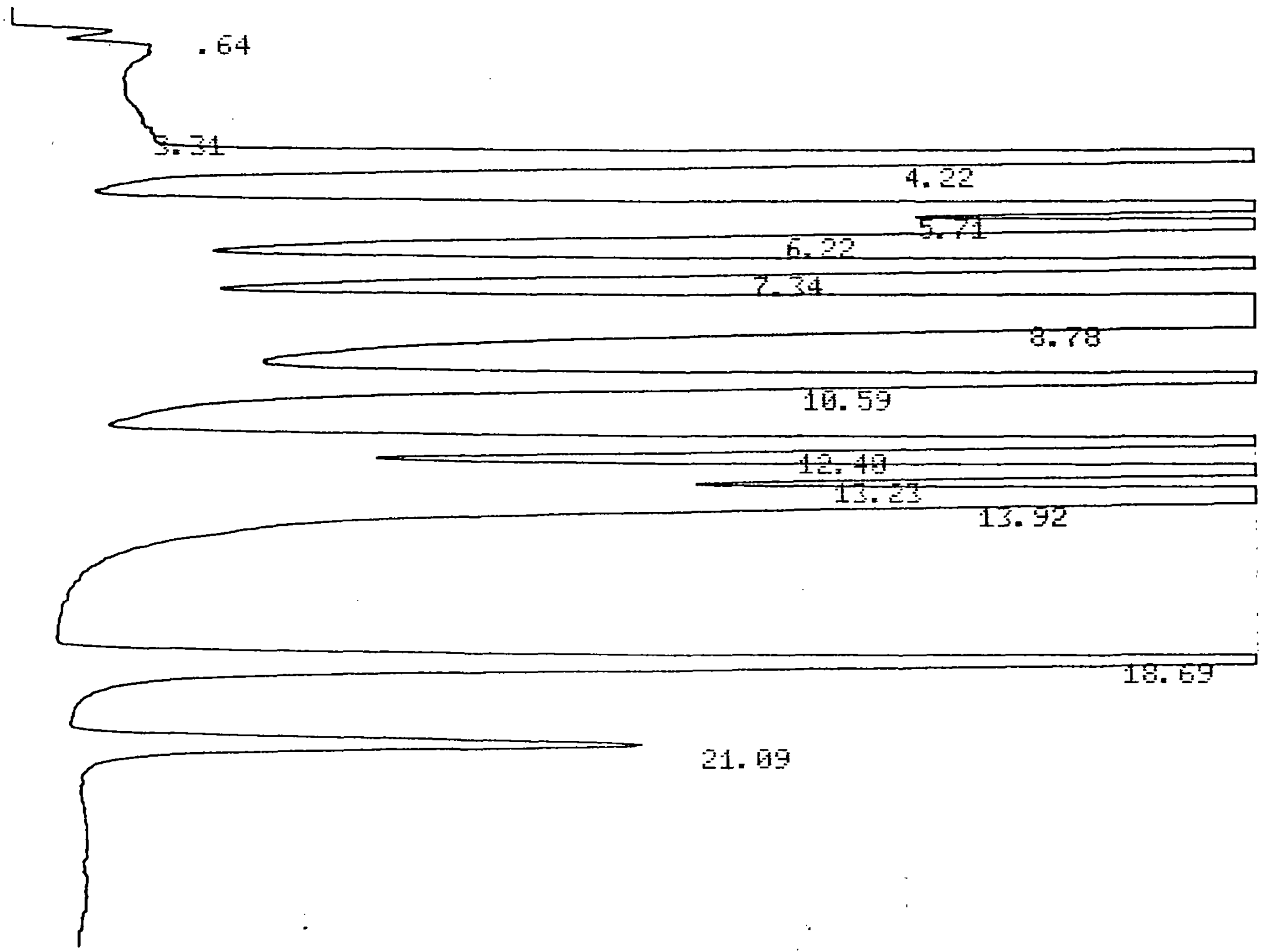
083

c

NAME	PPB	RT	AREA	BC	RF
1	0.	0.43	5723	01	
2	0.	9.38	151831	01	
TOTALS	0.		157554		

3ppb Purge
A

CHANNEL A INJECT 09/10/87 05:11:43



HALL 09/10/87 05:11:43 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 591 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	197207	03	
2	0.	3.31	146944	02	
3	0.	4.22	13773963	08	
4	0.	5.71	8230925	06	
5	0.	6.22	9504116	06	
6	0.	7.34	10,523,192	06	114%
7	0.	? 8.78	72,031,749	06	
8	0.	10.59	11,029,092	06	105%
9	0.	12.4	8,401,219	06	118%
10	0.	13.23	9,773,850	06	81%
11	0.	13.92	17761136	07	
12	0.	[illegible]	[illegible]		

HALL 09/10/87 05:11:43 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 591 INDEX 1

ANALYST: KWK

3ppb Purge A

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	197207	03	
2	0.	3.31	146944	02	
3	0.	4.22	13773963	08	
4	0.	5.71	8230925	06	
5	0.	6.22	9504116	06	
6	0.	7.34	10523192	06	114%
7	0.	8.78	72031749	06	
8	0.	10.59	11029092	06	105%
9	0.	12.4	8401219	06	118%
10	0.	13.23	9773850	06	85%
11	0.	13.92	17761136	07	
12	0.	18.69	9102609	01	
13	0.	21.09	2658279	01	
TOTALS	0.		173134281		

INPUT OVERRANGE AT RT= 4.77

PID 09/10/87 05:11:43 CH= "B" PS= 1.

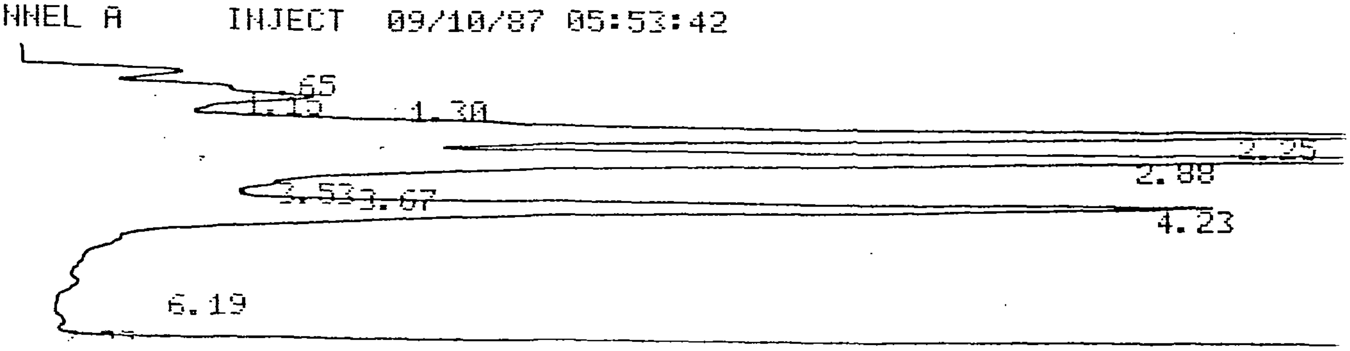
FILE 1. METHOD 5. RUN 565 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	6.11	142796	01	
2	0.	9.36	172798	01	
3	0.	13.1	109615	01	
4	0.	18.58	85096	01	
5	0.	20.98	188101	01	
TOTALS	0.		698406		

3ppb Purge B+C

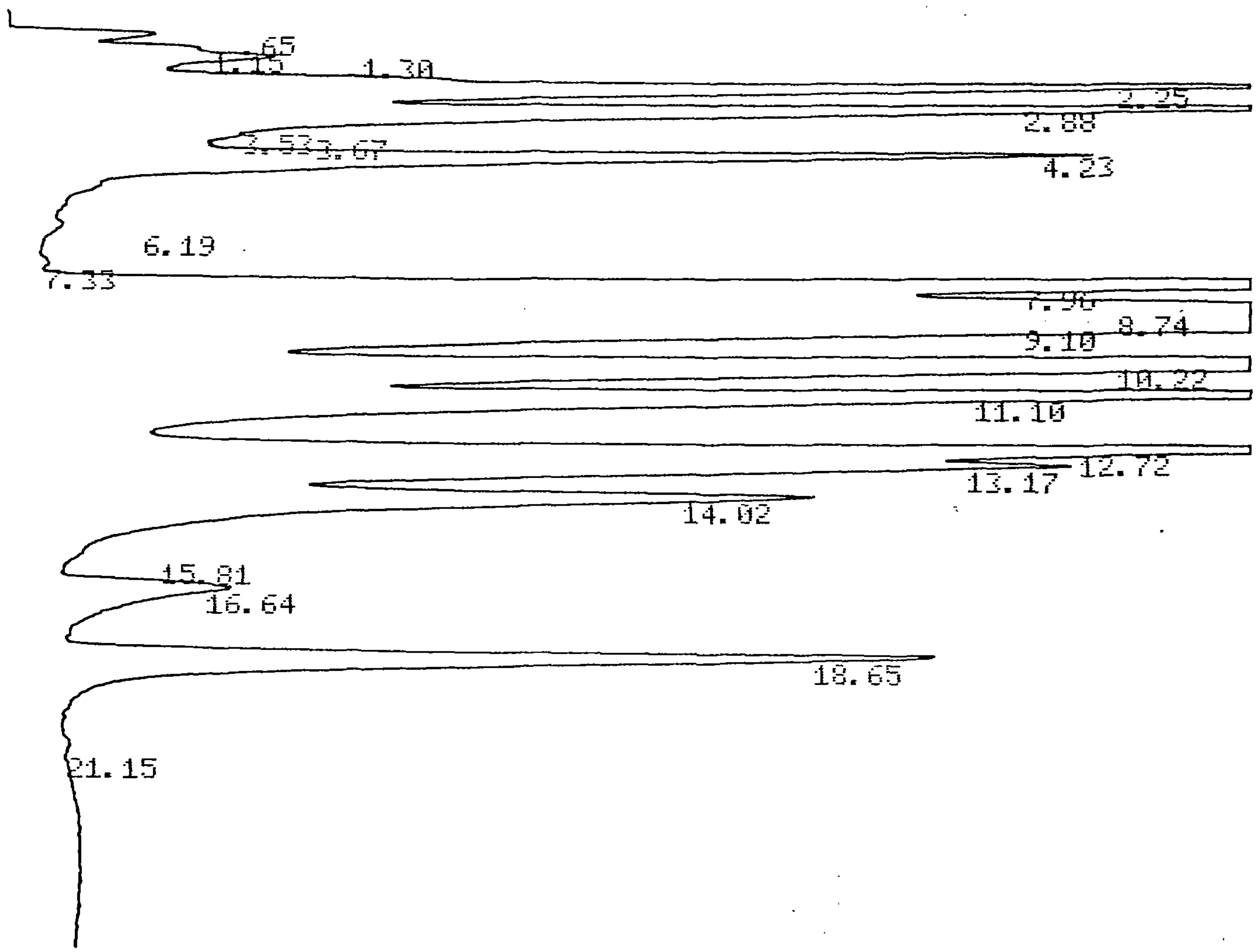
CHANNEL A INJECT 09/10/87 05:53:42



1	0.	6.11	142796	01
2	0.	9.36	172798	01
3	0.	13.1	109615	01
4	0.	18.58	85096	01
5	0.	20.98	188101	01
TOTALS	0.		698406	

3ppb
Purge B+C

CHANNEL A INJECT 09/10/87 05:53:42



HALL 09/10/87 05:53:42 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 592 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.65	498533	02	
2	0.	1.15	475725	02	
3	0.	1.3	1227197	02	
4	0.	2.25	6848232	02	
5	0.	2.88	6711362	02	
6	0.	3.53	128096	02	
7	0.	3.67	453452	02	
8	0.	4.23	4837126	03	
9	0.	6.19	40901	01	
10	0.	7.33	25699	02	
11	0.	7.96	8958103	02	

FILE 1. METHOD 5. RUN 592 INDEX 1

ANALYST: KWK

purge B+C
3ppb

NAME	PPB	RT	AREA	BC	RF
1	0.	0.65	498533	02	
2	0.	1.15	475725	02	
3	0.	1.3	1227197	02	
4	0.	2.25	6848232	02	
5	0.	2.88	6711362	02	
6	0.	3.53	128096	02	
7	0.	3.67	453452	02	
8	0.	4.23	4837126	03	
9	0.	6.19	40901	01	
10	0.	7.33	25699	02	
11	0.	7.96	8958103	02	
12	0.	8.74	11489967	02	
13	0.	9.1	16018995	02	
14	0.	10.22	13524864	02	
15	0.	11.1	9472749	02	
16	0.	12.72	7681575	02	
17	0.	13.17	5023591	02	
18	0.	14.02	6294876	08	
19	0.	15.81	4537	05	
20	0.	16.64	1384083	06	
21	0.	18.65	4907682	07	
22	0.	21.15	20187	01	
TOTALS	0.		106027532		

INPUT OVERRANGE AT RT= 4.76

PID 09/10/87 05:53:42 CH= "B" PS= 1.

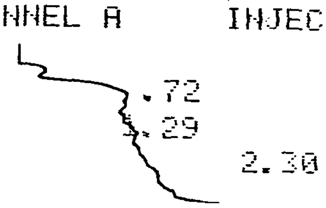
FILE 1. METHOD 5. RUN 566 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	7.82	226801	01	
2	0.	9.4	105345	01	
3	0.	12.56	59396	02	
4	0.	13.55	366539	03	
5	0.	19.85	113115	01	
6	0.	22.75	676306	01	
TOTALS	0.		1547502		

Blank

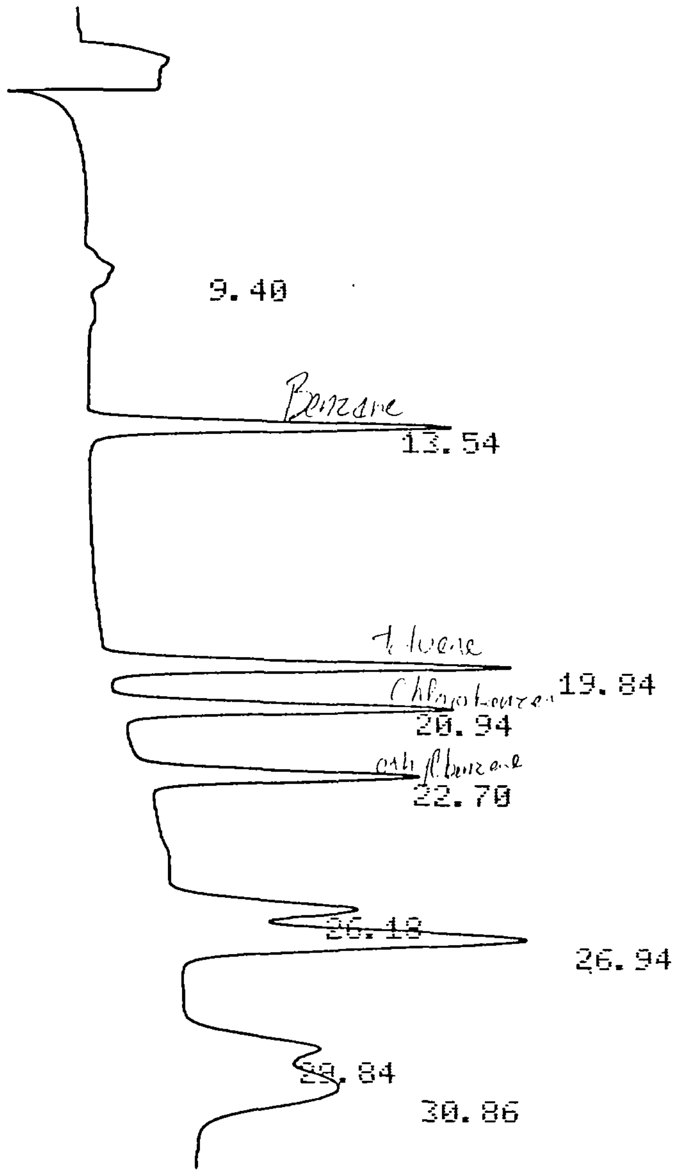
CHANNEL A INJECT 09/10/87 06:35:38



NAME	PPB	RT	AREA BC	RF
1	0.	0.5	12730 01	
2	0.	9.39	119699 01	
TOTALS	0.		132429	

Aromatic mix + Xylenes @ 10ppb

CHANNEL A INJECT 09/10/87 11:43:51



INPUT OVERRANGE AT RT= 4.7

PID 09/10/87 11:43:51 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 574 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	9.4	161157 01	
2	0.	13.54	1135225 01	
3	0.	19.84	1283320 01	
4	0	20.94	[illegible] 01	

FID 09/10/87 11:43:51 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 574 INDEX 1

ANALYST: KWK

Aromatic Mix
+Xylenes
10 ppb

NAME	PPB	RT	AREA	BC	RF
1	0.	9.4	161157	01	
2	0.	13.54	1135225	01	
3	0.	19.84	1283320	01	
4	0.	20.94	1118250	01	
5	0.	22.7	974139	01	
~~6~~	~~0.~~	~~26.18~~	~~952778~~	~~02~~	
~~7~~	~~0.~~	~~26.94~~	~~2077419~~	~~03~~	
8	0.	29.84	1029810	02	
9	0.	30.86	1759429	03	
TOTALS	0.		10491527		

HALL 09/10/87 11:43:51 CH= "A" PS= 1.

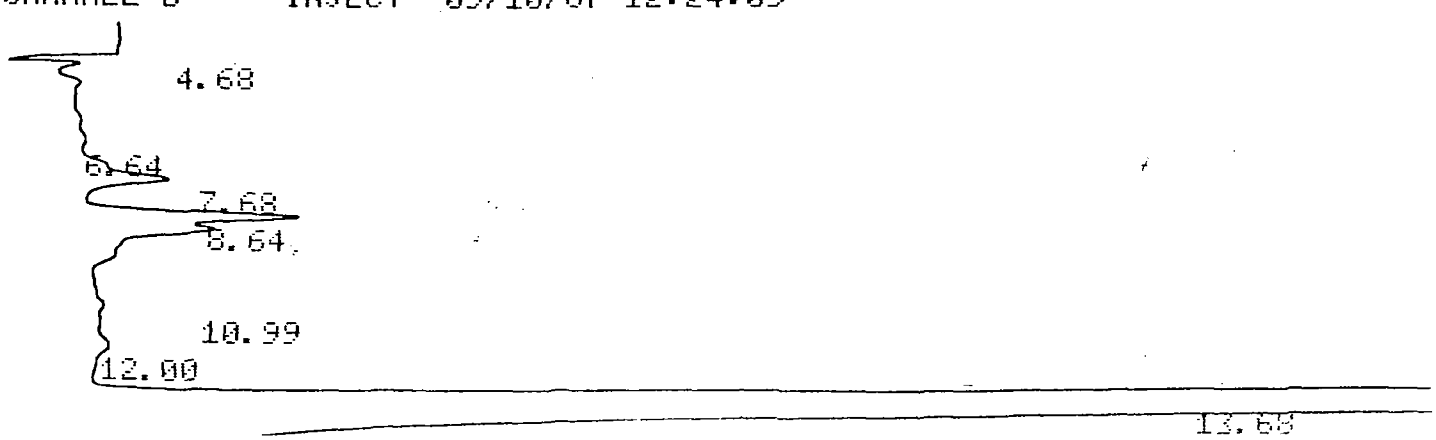
FILE 1. METHOD 5. RUN 600 INDEX 1

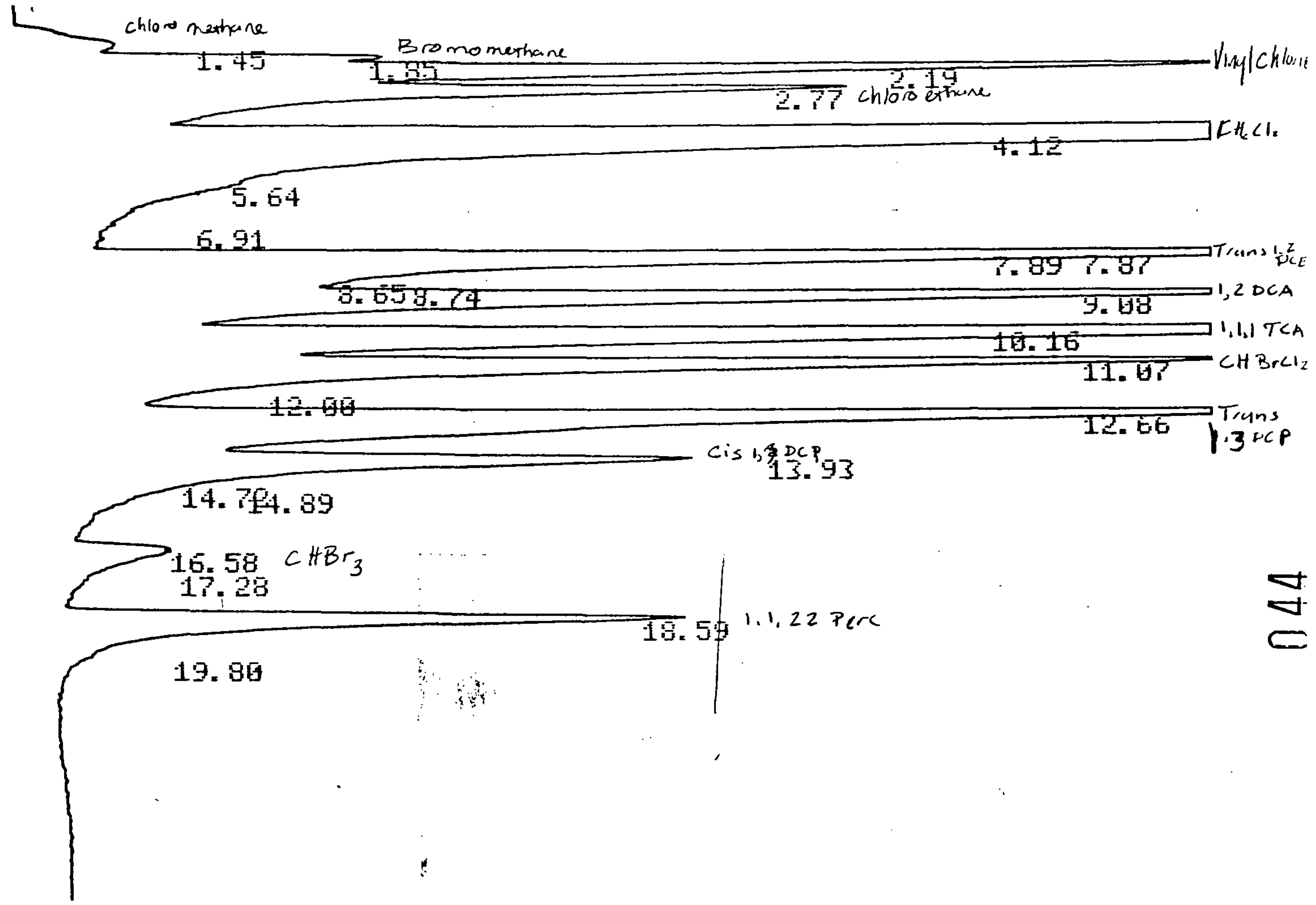
ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.3	339530	02	
2	0.	4.18	11711563	03	
3	0.	8.72	3722772	01	
4	0.	10.25	57568	01	
5	0.	18.72	152317	02	
6	0.	21.07	18148165	03	
TOTALS	0.		34131915		

Palo Alto
7041084 neat

CHANNEL B INJECT 09/10/87 12:24:09





044

HALL 08/29/87 18:39:53 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 120 INDEX 1

ANALYST: KWK

8/29
Purge mix B + C
at 3ppb

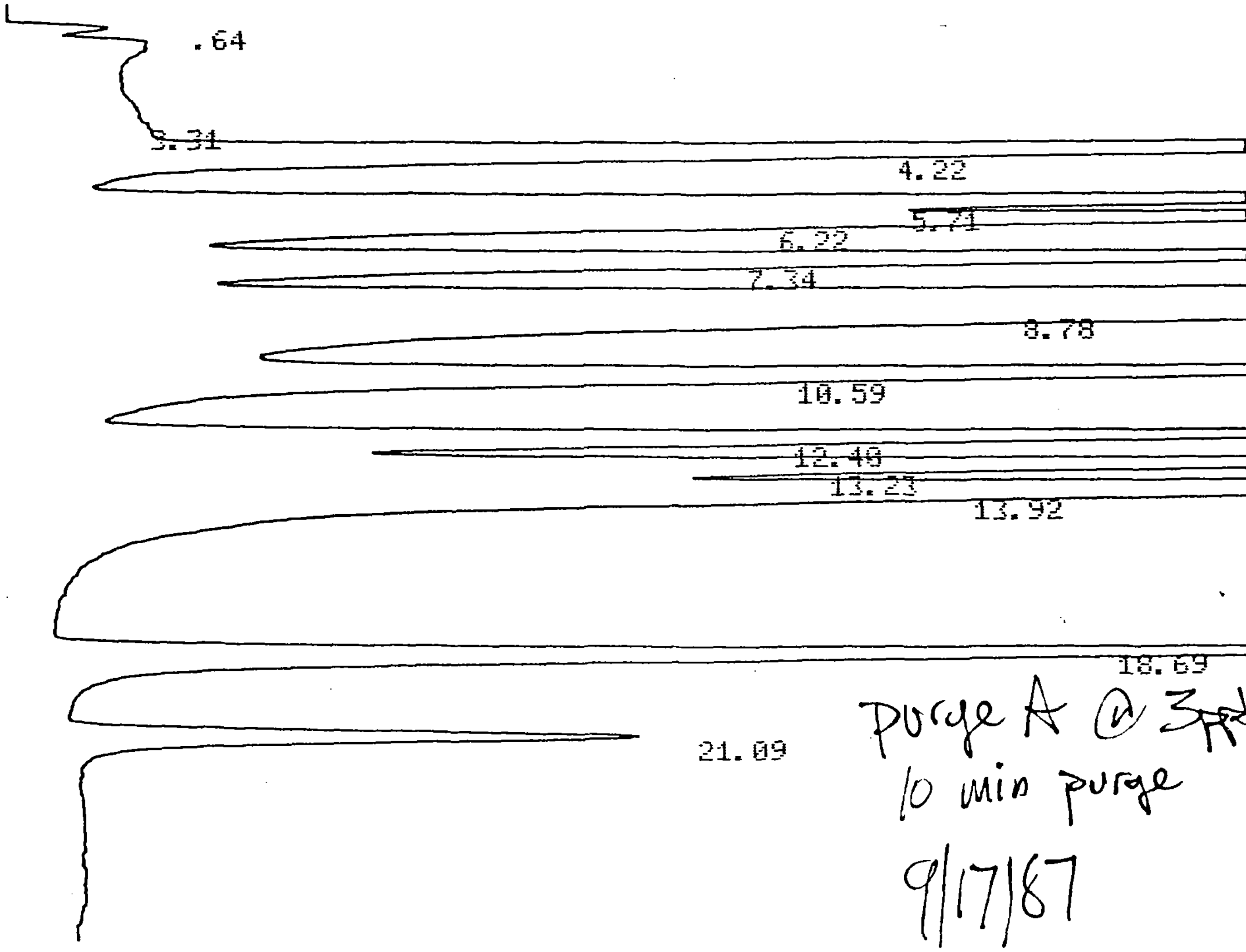
NAME	PPB	RT	AREA	BC	RF
1	0.	1.45	567359	02	
2	0.	1.85	987818	02	
3	0.	2.19	5465325	02	
4	0.	2.77	5123258	02	
5	0.	4.12	37899757	09	
6	0.	6.91	4872	05	
7	0.	7.87	2428185	02	
8 2,628,206	0.	7.89	5456433	02	
9	0.	8.65	300703	02	
10	0.	8.74	253864	02	
11	0.	9.08	7067131	02	
12 2,19[illegible]47	0.	10.16	9589079	02	
13	0.	11.07	6791326	02	
14	0.	12.	292961	02	
15	0.	12.66	8946002	02	
16	0.	13.93	3913073	02	
17	0.	14.72	211858	02	
18	0.	14.89	419653	03	
19	0.	16.58	639703	02	
20	0.	17.28	55749	03	
21	0.	18.59	3519406	02	
22	0.	19.8	66886	03	

USE for Peak I.D. only

2	0.	9.38	151831	01
TOTALS	0.		157554	

Purge A

CHANNEL A INJECT 09/10/87 05:11:43



Purge A @ 3ppb
10 min purge
9/17/87

HALL 09/10/87 05:11:43 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 591 INDEX 1

ANALYST: KWK

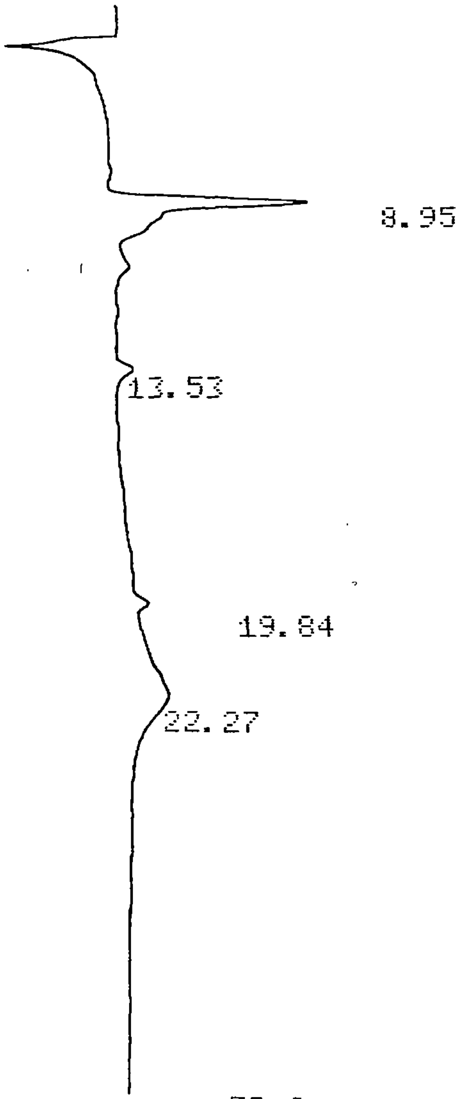
NAME	PPB	RT	AREA	BC	RF
1 RF	0.	0.64	197207	03	
2	0.	3.31	146944	02	
3 3957658.7	0. CH_2Cl_2	4.22	13773963	08	
4	0. $CHCl_2Et$	5.71	8230925	06	
5	0. 11DCE	6.22	9504116	06	
6	0. 11DCA	7.34	10523192	06	114%
7	0. $CHCl_3$/[illegible]?	8.78	72031749	06	
8	0. CCl_4	10.59	11029092	06	105%
9	0. 12 DCP	12.4	8401219	06	118%
10	0. TCE	13.23	9773850	06	80%
11	0. 1112 TCA [illegible]	13.92	17761136	07	
12	0. [illegible]	18.69	9102609	01	
13	0. [illegible]	21.09	2658279	01	
TOTALS	0.		173134281		

Use for peak I.D. only

080

CHANNEL B INJECT 09/16/87 13:09:42

50 ppb std MEK
10 min purge



ER 0

INPUT OVERRANGE AT RT= 4.63

PID 09/16/87 13:09:42 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 544 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	8.95	535856	01	
2	0.	13.53	60716	01	
3	0.	19.84	40280	01	
4	0.	22.27	258803	01	
TOTALS	0.		895655		

HALL 09/16/87 13:09:42 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 569 INDEX 1

ANALYST: KWK

PID 09/16/87 13:09:42 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 544 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	8.95	535856 01	
2	0.	13.53	60716 01	MEK
3	0.	19.84	40280 01	
4	0.	22.27	258803 01	
TOTALS	0.		895655	

HALL 09/16/87 13:09:42 CH= "A" PS= 1.

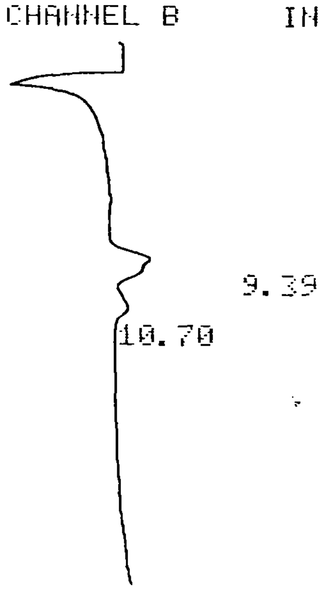
FILE 1. METHOD 5. RUN 569 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	0.62	26063 02	
2	0.	1.48	316464 03	
3	0.	4.1	26198357 01	
4	0.	8.38	18328675 02	
5	0.	10.18	352122 03	
6	0.	18.7	115443 01	
TOTALS	0.		45337124	

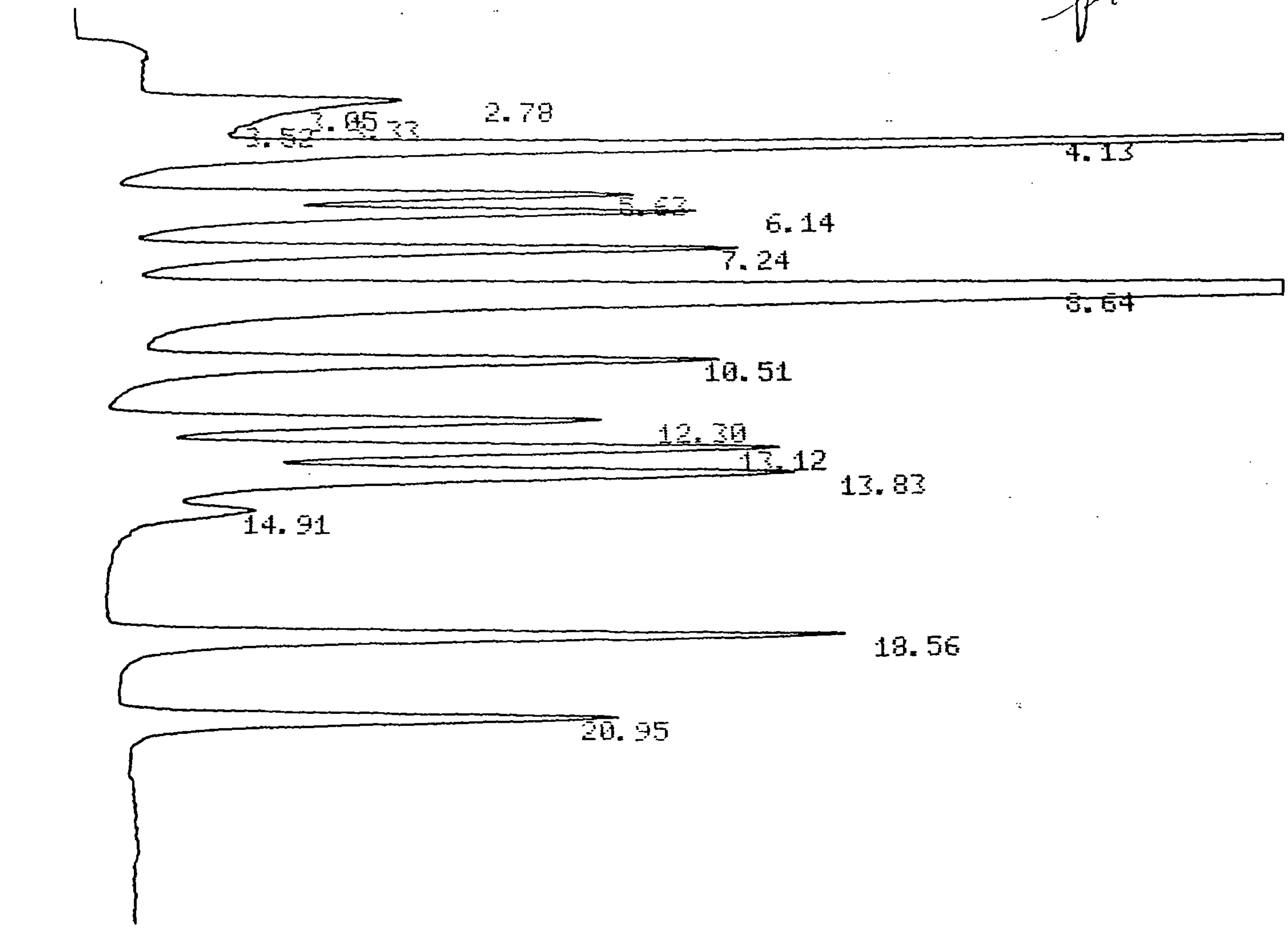
M082427 5 ml
10 min purge

CHANNEL B INJECT 09/16/87 14:00:59



708 2431 [illegible] Spike

CHANNEL A   INJECT   09/09/87 10:31:01



HALL   09/09/87 10:31:01   CH= "A"   PS=   1.

FILE   1.   METHOD   5.   RUN 775   INDEX   1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.78	1056226	02	
2	0.	3.05	474632	02	
3	0.	3.33	294226	02	
4	0.	3.52	443578	02	
5	0.	4.13	6138473	03	
6	0.	5.63	2064379	02	
7	0.	6.14	2501142	02	
8	0.	7.24	2591075	02	
9	0.	8.64	14709211	03	
10	0.	10.51	2639534	01	
11	0.	12.3	2306799	02	
12	0.	13.12	3220954	02	
13	0.	13.83	4179604	02	
14	0.	14.91	869869	03	
15	0.	18.56	3356565	01	
16	0.	20.95	2292800	01	
TOTALS	0.		49139067		

FILE 1. METHOD 5. RUN 775 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.78	1056226	02	
2	0.	3.05	474632	02	
3	0.	3.33	294226	02	
4	0.	3.52	443578	02	
5	0.	4.13	6138473	03	
6	0.	5.63	2064379	02	
7	0.	6.14	2501142	02	
8	0.	7.24	2591075	02	
9	0.	8.64	14709211	03	
10	0.	10.51	2639534	01	
11	0.	12.3	2306799	02	
12	0.	13.12	3220954	02	
13	0.	13.83	4179604	02	
14	0.	14.91	869869	03	
15	0.	18.56	3356565	01	
16	0.	20.95	2292800	01	
TOTALS	0.		49139067		

7082437
spike

INPUT OVERRANGE AT RT= 4.6

PID 09/09/87 10:31:01 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 745 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	5.82	39555	02	
2	0.	6.03	34433	03	
3	0.	9.28	653962	02	
4	0.	10.8	87173	03	
5	0.	12.99	36265	02	
6	0.	13.44	71767	03	
7	0.	18.46	31446	01	
8	0.	19.73	78426	01	
9	0.	20.85	136205	01	
10	0.	22.59	67516	01	
TOTALS	0.		1236748		

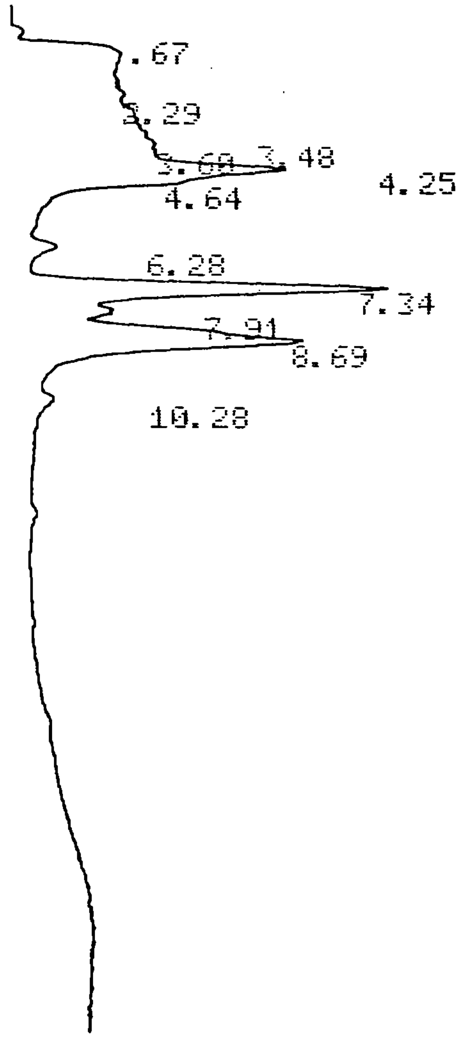
121

NAME	PPB	RT	AREA BC	RF
TOTALS	0.			

1088427 5 ML

PLOT "A" AUTO

CHANNEL A   INJECT 09/09/87 15:12:14



HALL   09/09/87 15:12:14   CH= "A"   PS= 1.

FILE 1.   METHOD 5.   RUN 572   INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	0.67	21037 03	
2	0.	2.29	13011 02	
3	0.	3.48	45401 02	
4	0.	3.6	9391 03	
5	0.	4.25	619026 02	
6	0.	[illegible]	[illegible]	

HALL 09/09/87 15:12:14 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 572 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	0.67	21037 03	
2	0.	2.29	13011 02	
3	0.	3.48	45401 02	
4	0.	3.6	9391 03	
5	0.	4.25	619026 02	
6	0.	4.64	106560 03	
7	0.	6.28	82510 01	
8	0.	7.34	1395620 02	
9	0.	7.91	282482 02	
10	0.	8.69	1716356 03	
11	0.	10.28	32190 01	
TOTALS	0.		4323584	

7082427

INPUT OVERRANGE AT RT= 4.74

PID 09/09/87 15:12:14 CH= "B" PS= 1.

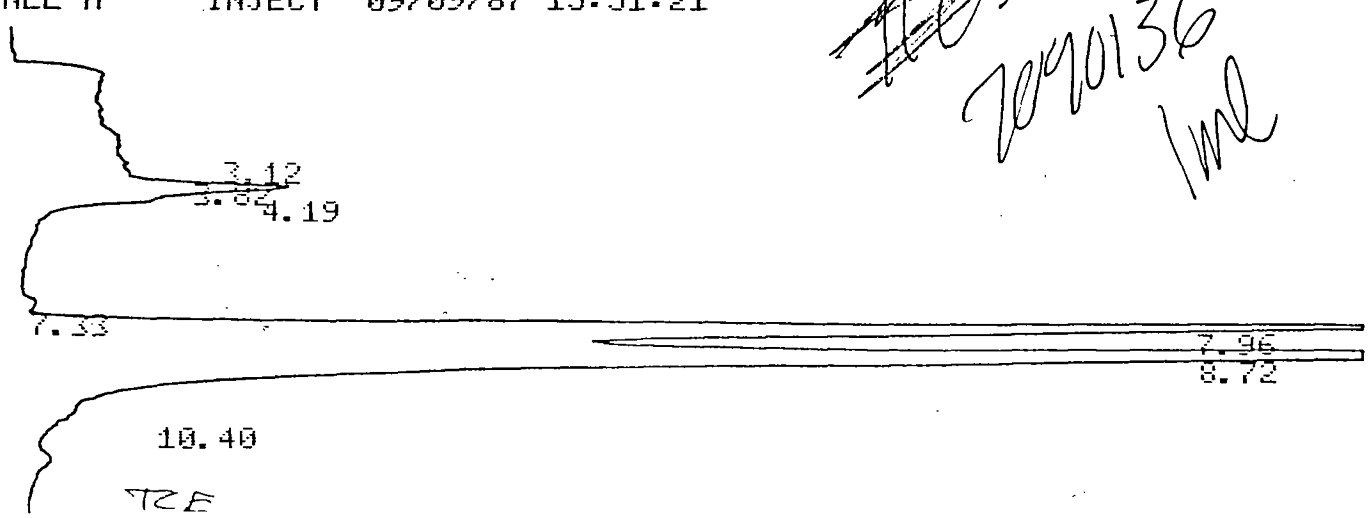
FILE 1. METHOD 5. RUN 546 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	9.39	273666 02	
2	0.	10.7	75467 03	
TOTALS	0.		349133	

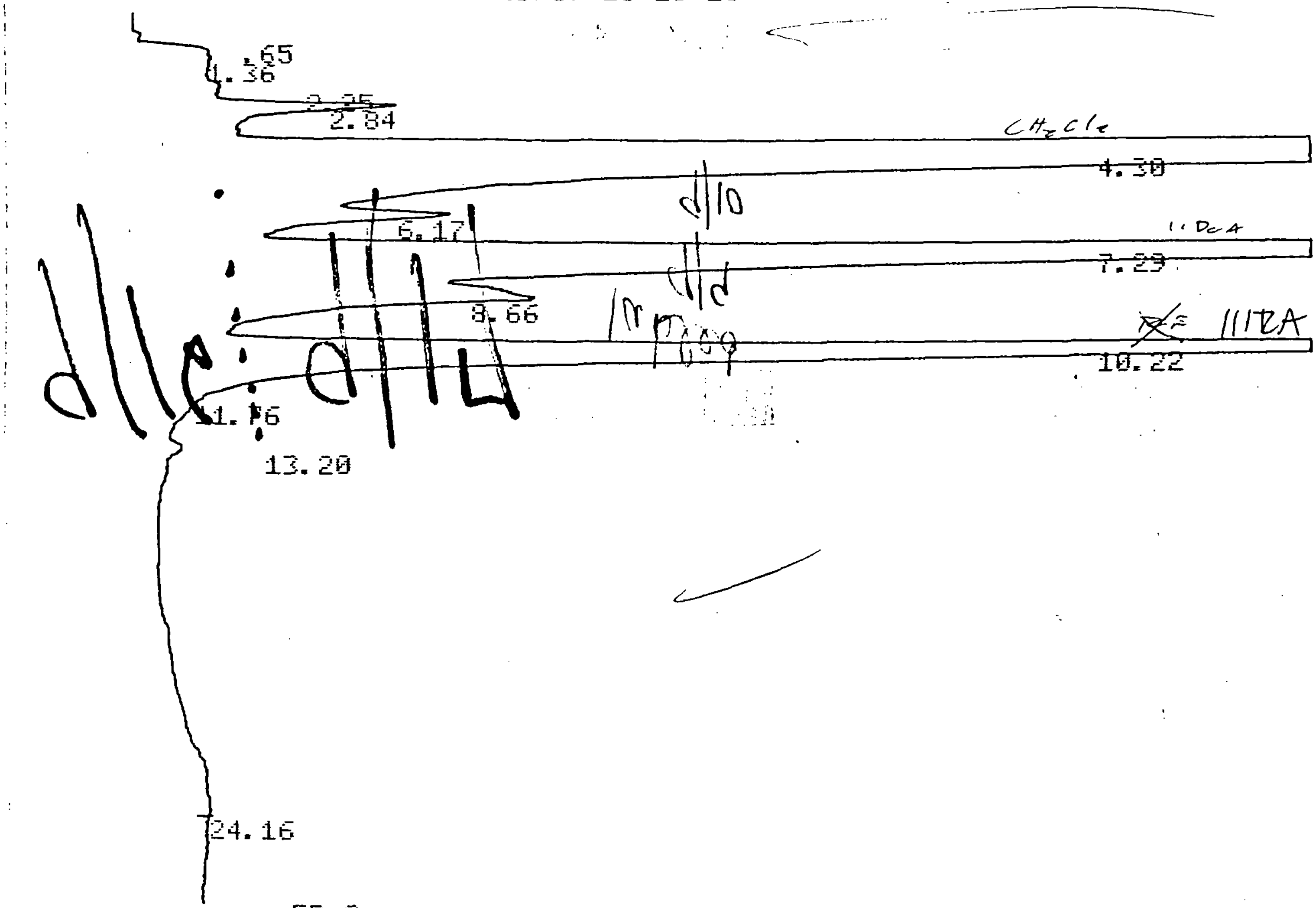
7090136
Iml

CHANNEL A INJECT 09/09/87 15:51:21



7082428 50μL

CHANNEL A INJECT 09/09/87 16:28:15



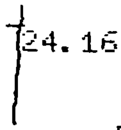
ER 0

HALL 09/09/87 16:28:15 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 574 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.65	10539	02	
2	0.	1.36	242757	03	6481167
3	0.	2.25	68304	02	
4	0.	2.84	928771	02	
5	0.	4.3	69395625	08	
6	0.	6.17	503224	05	
7	0.	7.29	21963679	06	
8	0.	8.66	2595974	06	
9	0.	10.22	12112051	06	
10	0.	11.76	67732	07	
11	0.	13.2	57159	01	
12	0.	24.16	450027	01	
TOTALS	0.		108395842		



ER 0

HALL 09/09/87 16:28:15 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 574 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.65	10539	02	
2	0.	1.36	242757	03	6481167
3	0.	2.25	68304	02	
4	0.	2.84	928771	02	
5	0.	4.3	69395625	08	
6	0.	6.17	503224	05	
7	0.	7.29	21963679	06	
8	0.	8.66	2595974	06	
9	0.	10.22	12112051	06	
10	0.	11.76	67732	07	
11	0.	13.2	57159	01	
12	0.	24.16	450027	01	
TOTALS	0.		108395842		

7082428

INPUT OVERRANGE AT RT= 4.67

PID 09/09/87 16:28:15 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 548 INDEX 1

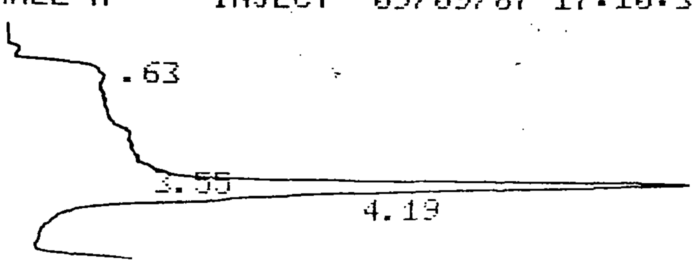
ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.39	280741	02	
2	0.	10.67	83268	03	
TOTALS	0.		364009		

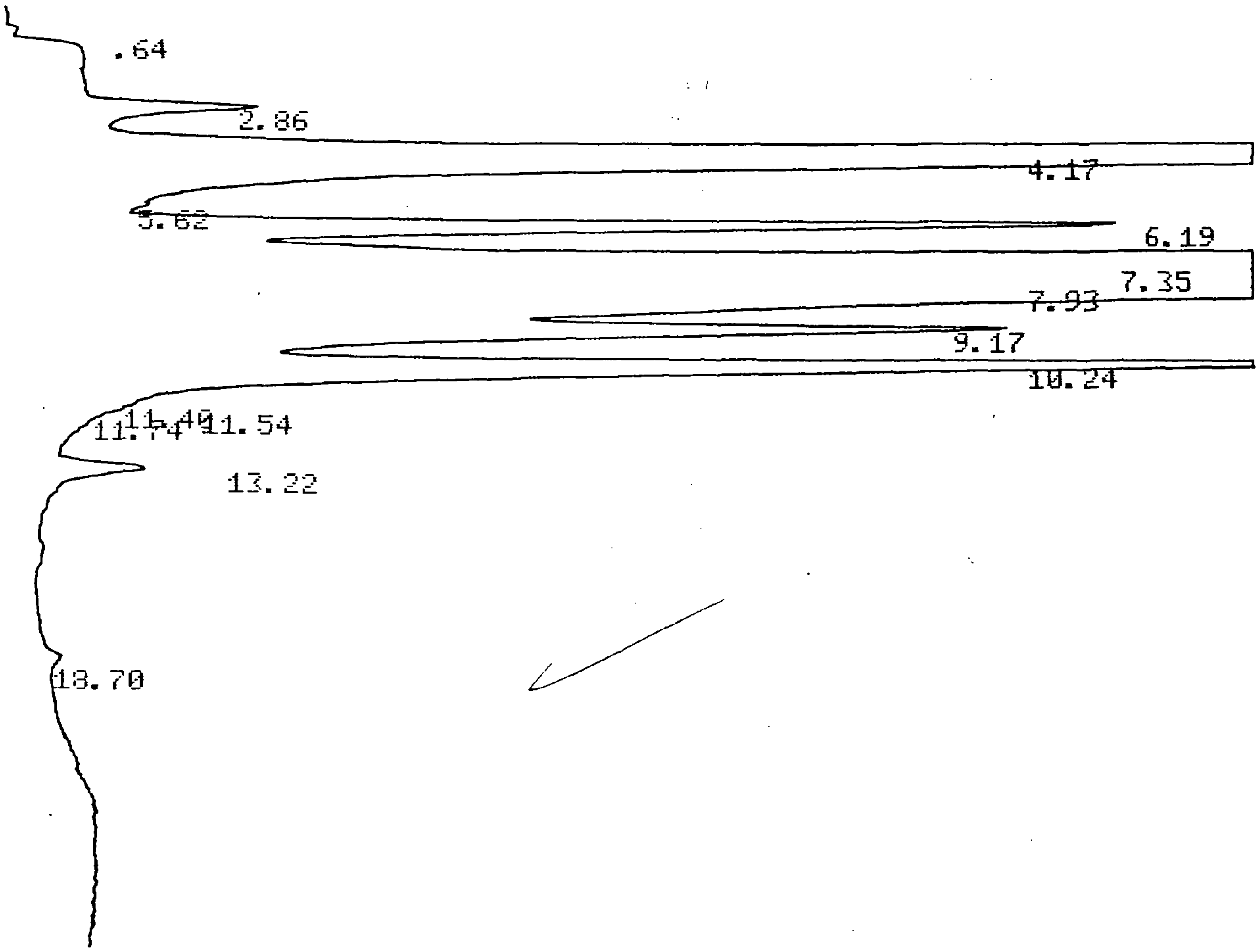
708 24~~28~~29 ↓ .5 ml

060

CHANNEL A INJECT 09/09/87 17:10:38



CHANNEL A INJECT 09/10/87 09:33:28 7082424 Neat



HALL 09/10/87 09:33:28 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 597 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	19580	03	
2	0.	2.86	712025	02	
3	0.	4.17	36198033	08	
4	0.	5.62	11291	06	
5	0.	6.19	4215084	06	
6	0.	7.35	52969847	06	
7	0.	7.93	34519489	06	
8	0.	9.17	5517238	06	
9	0.	10.24	7958253	06	
10	0.	11.4	75532	06	
11	0.	11.54	65053	06	
12	0.	11.74	13496	07	
13	0.	13.22	398136	01	

INDEX

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.64	19580	03	
2	0.	2.86	712025	02	
3	0.	4.17	36198033	08	
4	0.	5.62	11291	06	
5	0.	6.19	4215084	06	
6	0.	7.35	52969847	06	
7	0.	7.93	34519489	06	
8	0.	9.17	5517238	06	
9	0.	10.24	7958253	06	
10	0.	11.4	75532	06	
11	0.	11.54	65053	06	
12	0.	11.74	13496	07	
13	0.	13.22	398136	01	
14	0.	18.7	64661	01	
TOTALS	0.		142737718		

7082429

INPUT OVERRANGE AT RT= 4.65

PID 09/10/87 09:33:28 CH= "B" PS= 1.

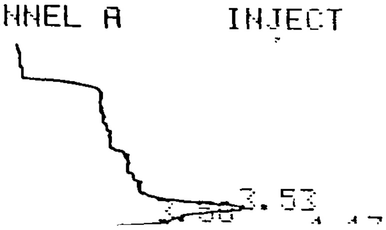
FILE 1. METHOD 5. RUN 571 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	9191	01	
2	0.	6.09	50676	01	
3	0.	7.8	409294	01	
4	0.	9.39	141159	02	
5	0.	10.43	71372	03	
6	0.	23.5	239261	02	
7	0.	24.48	141056	02	
8	0.	25.15	1649617	03	
9	0.	27.07	444700	01	
TOTALS	0.		3156326		

7082430 50 µL

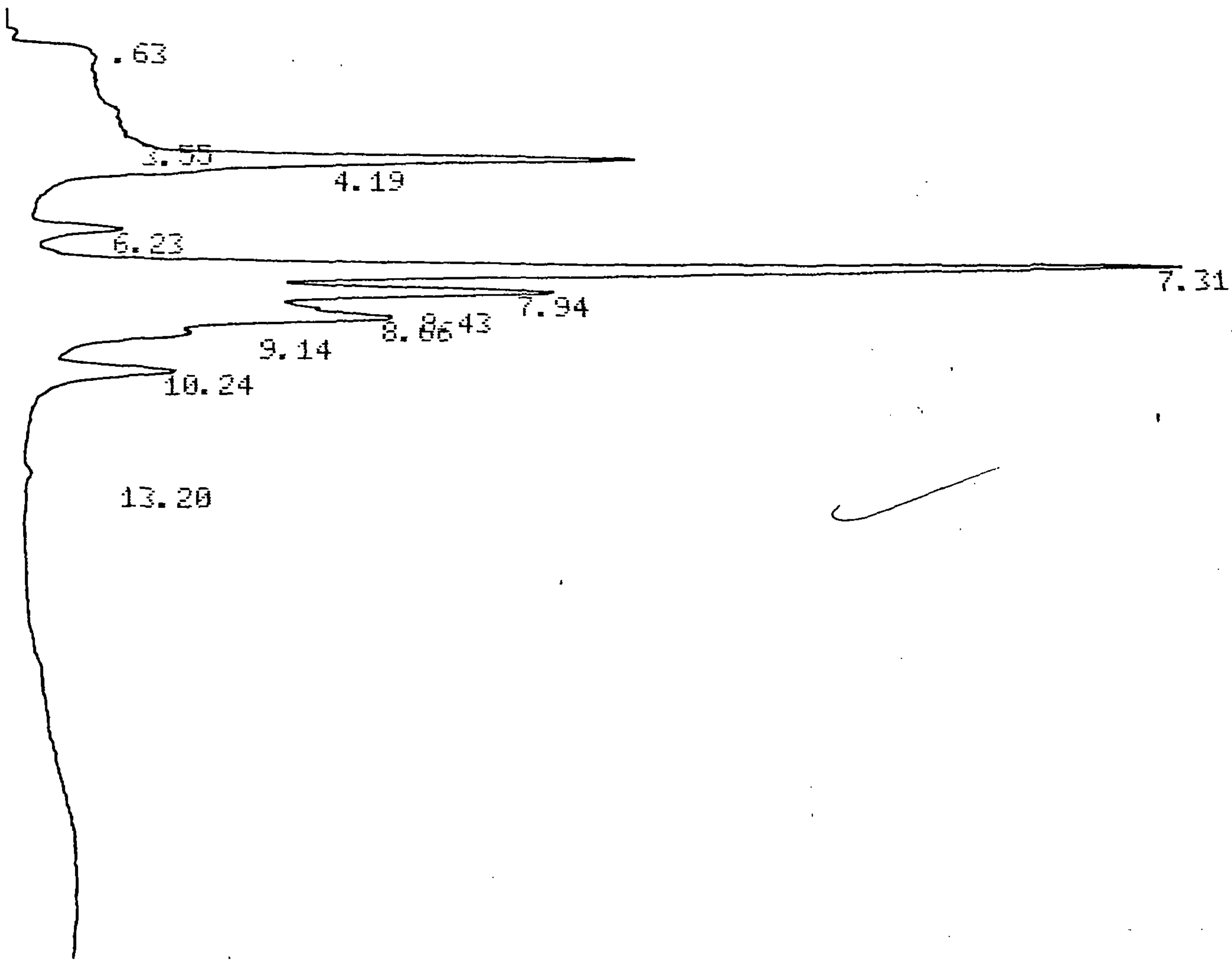
CHANNEL A INJECT 09/10/87 10:20:37



1	0.	9.39	280741	02	
2	0.	10.67	83268	03	
TOTALS	0.		364009		

7082989 ↓ .5 ml

CHANNEL A INJECT 09/09/87 17:10:38



HALL 09/09/87 17:10:38 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 575 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.63	18951	03	
2	0.	3.55	362018	02	
3	0.	4.19	2914458	03	
4	0.	6.23	315568	02	
5	0.	7.31	4985305	02	
6	0.	7.94	2451712	02	
7	0.	8.43	645913	02	
8	0.	8.66	1829304	02	

7091068

~~7090686~~ 50 µL

HALL 09/09/87 17:10:38 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 575 INDEX 1

ANALYST: KWK

7082429

NAME	PPB	RT	AREA	BC	RF
1	0.	0.63	18951	03	
2	0.	3.55	362018	02	
3	0.	4.19	2914458	03	
4	0.	6.23	315568	02	
5	0.	7.31	4985305	02	
6	0.	7.94	2451712	02	
7	0.	8.43	645913	02	
8	0.	8.66	1829304	02	
9	0.	9.14	776412	02	
10	0.	10.24	727375	03	
11	0.	13.2	25018	01	
TOTALS	0.		15052034		

~~7091068~~

~~7090686~~ 50 μL

INPUT OVERRANGE AT RT= 4.71

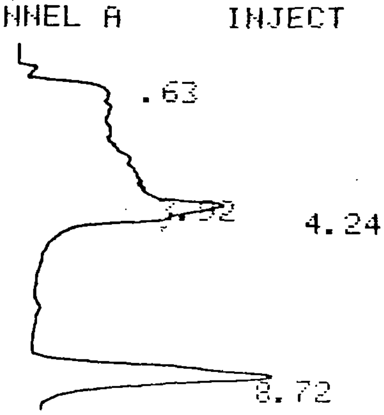
PID 09/09/87 17:10:38 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 549 INDEX 1

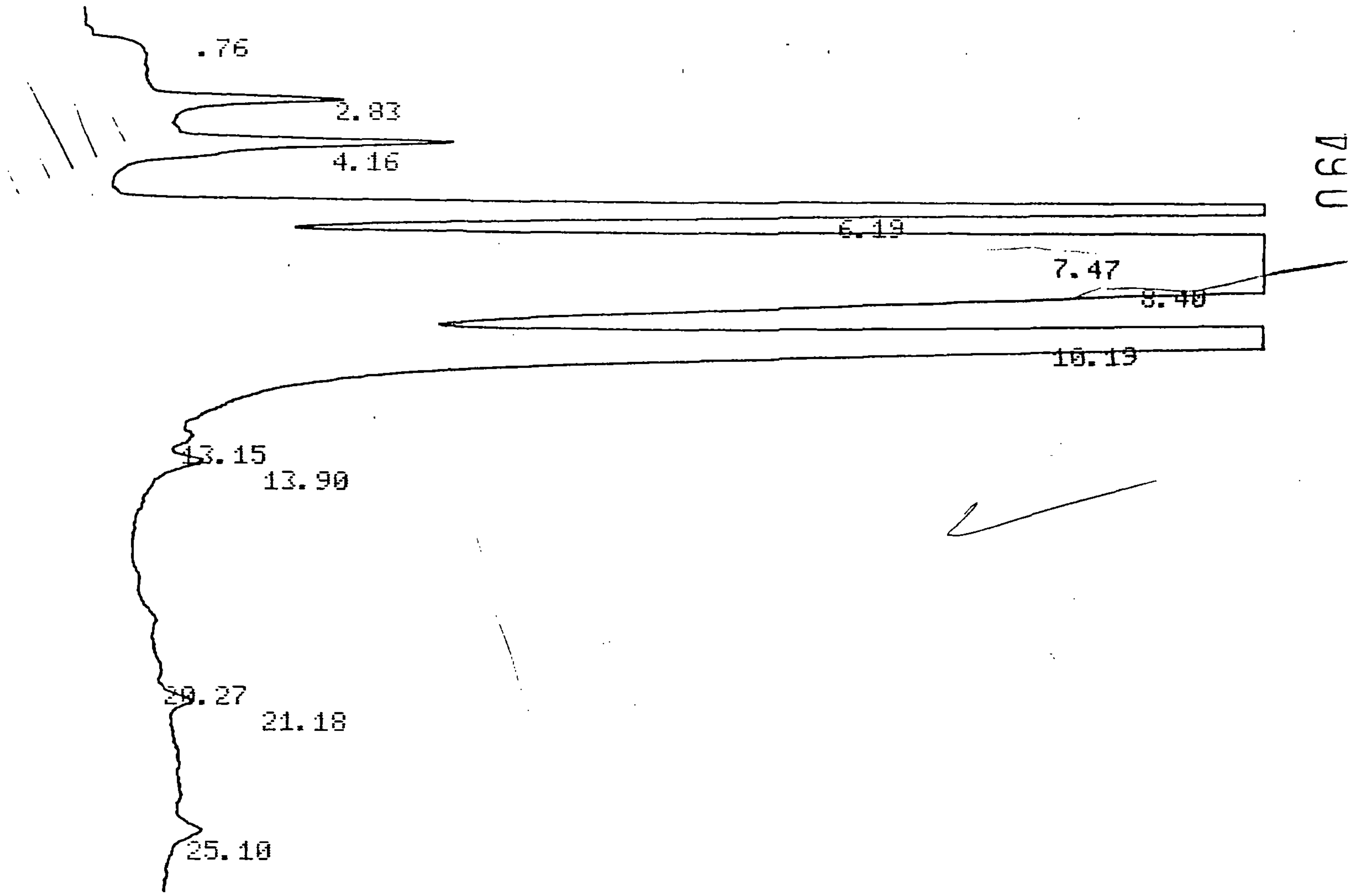
ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	7.6	224626	02	
2	0.	7.82	58114	03	
3	0.	9.39	264583	02	
4	0.	10.62	86326	03	
5	0.	25.18	155753	01	
TOTALS	0.		789402		

CHANNEL A INJECT 09/09/87 17:52:23



CHANNEL A INJECT 09/09/87 19:52:22 0.5ml 7082430



HALL 09/09/87 19:52:22 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 578 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.76	5958	03	
2	0.	2.83	597584	01	
3	0.	4.16	1495180	01	
4	0.	6.19	11400460	02	
5	0.	7.47	83222384	02	
6	0.	8.4	55986603	08	
7	0.	10.19	38463549	05	
8	0.	13.15	56191	06	
9	0.	13.9	191263	07	
10	0.	20.27	144479	02	
11	0.	21.18	165201	03	
12	0.	25.1	179420	01	
TOTALS	0.		191908272		

HALL 09/10/87 10:20:37 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 598 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.53	402911	02	
2	0.	3.58	207835	02	
3	0.	4.17	1144391	03	
4	0.	6.22	488759	02	
5	0.	7.3	13964490	08	
6	0.	8.72	313647	05	
7	0.	10.24	2717817	05	
TOTALS	0.		19239850		

7082930

50μL

INPUT OVERRANGE AT RT= 4.69

PID 09/10/87 10:20:38 CH= "B" PS= 1.

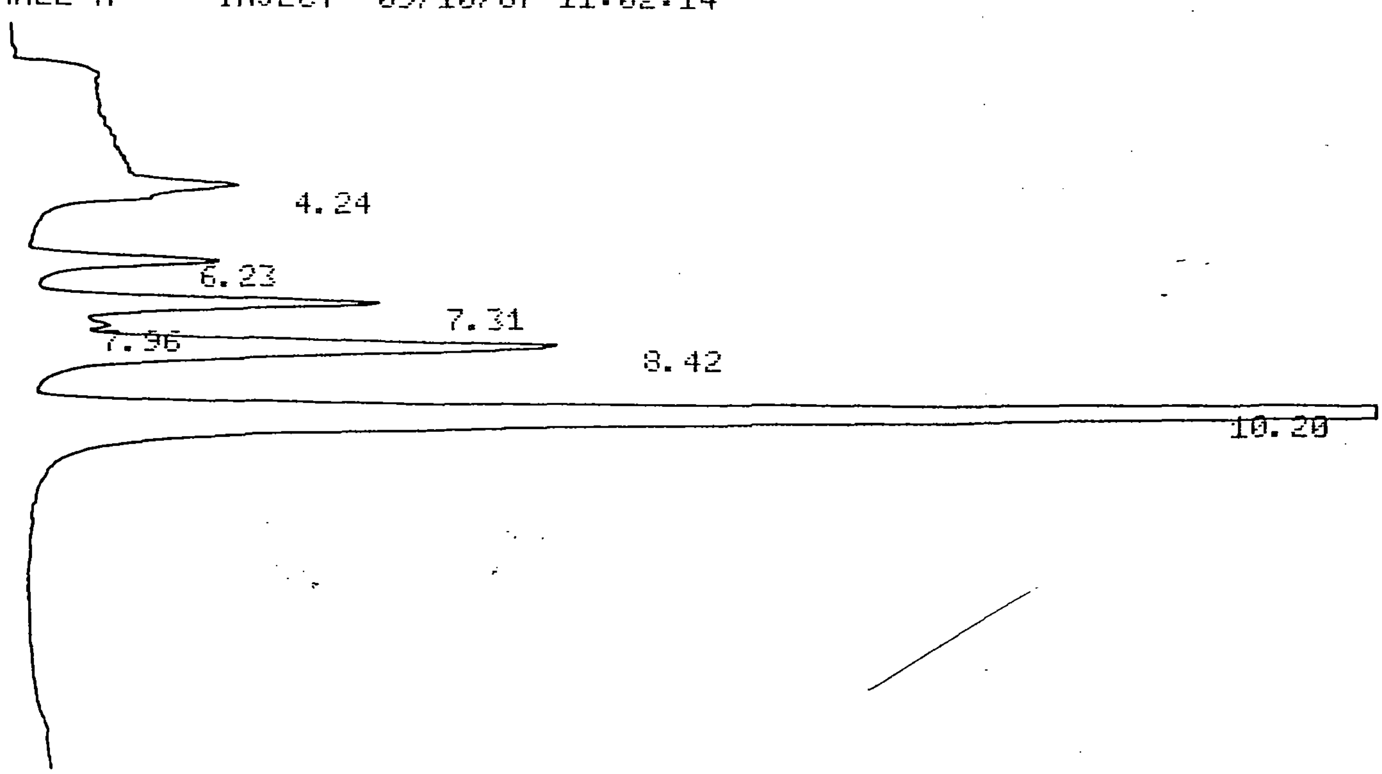
FILE 1. METHOD 5. RUN 572 INDEX 1

ANALYST: KWK

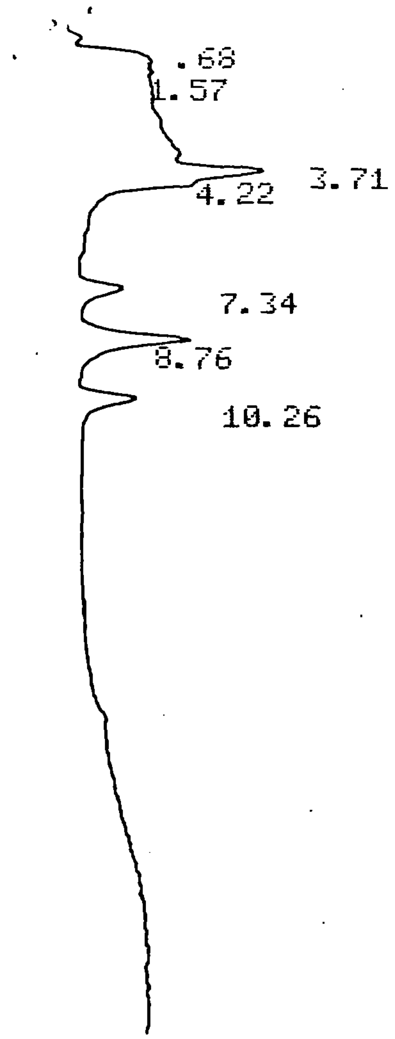
NAME	PPB	RT	AREA	BC	RF
1	0.	9.39	148929	01	
TOTALS	0.		148929		

7082932 Neat

CHANNEL A INJECT 09/10/87 11:02:14



708 2431



HALL 09/16/87 11:04:10 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 566 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.68	19143	02	
2	0.	1.57	287033	03	
3	0.	3.71	426869	02	
4	0.	4.22	845010	03	
5	0.	7.34	151491	01	
6	0.	8.76	493445	01	
7	0.	10.26	220482	01	
TOTALS	0.		2443473		

INPUT OVERRANGE AT RT= 4.7

PID 09/16/87 11:04:10 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 541 INDEX 1

ANALYST: KWK

FILE 1. METHOD 5. RUN 566 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.68	19143	02	
2	0.	1.57	287033	03	
3	0.	3.71	426869	02	
4	0.	4.22	845010	03	
5	0.	7.34	151491	01	
6	0.	8.76	493445	01	
7	0.	10.26	220482	01	
TOTALS	0.		2443473		

7082431

INPUT OVERRANGE AT RT= 4.7

PID 09/16/87 11:04:10 CH= "B" PS= 1.

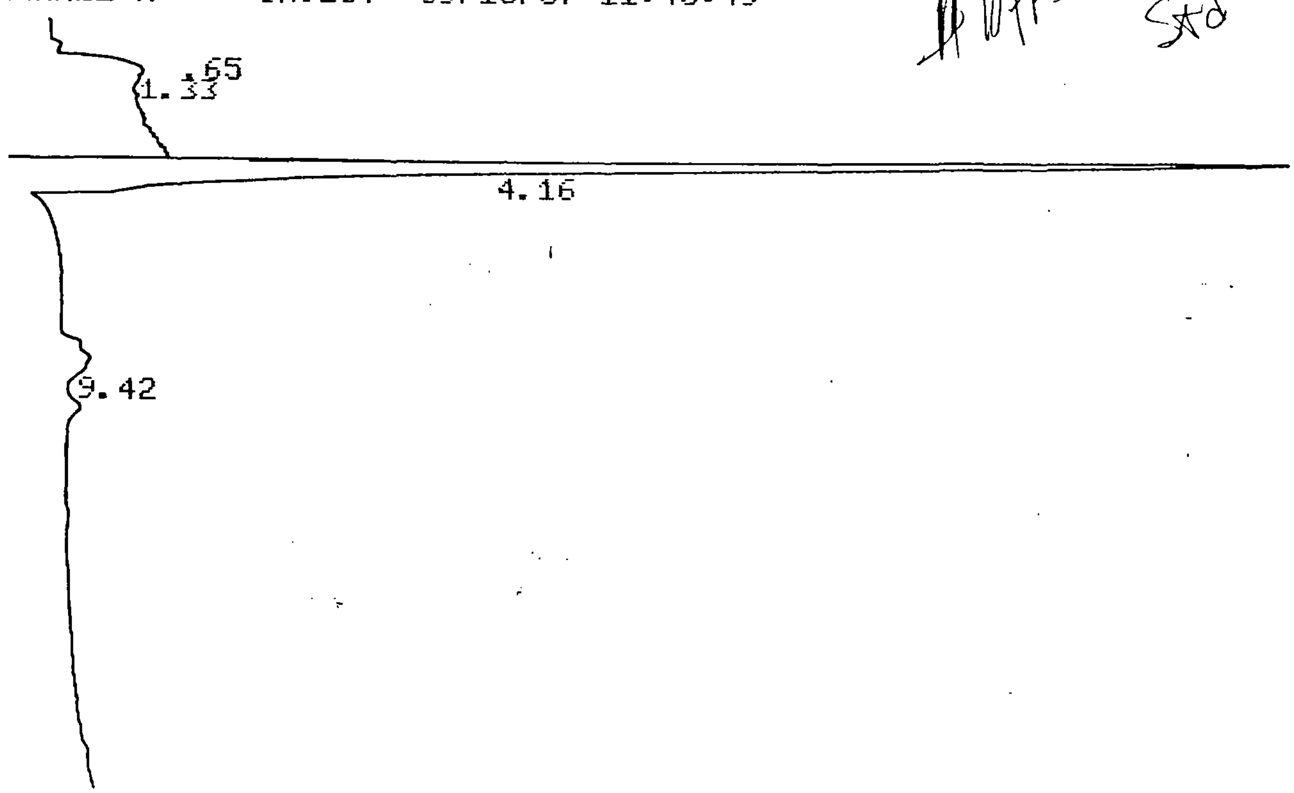
FILE 1. METHOD 5. RUN 541 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	19548	01	
2	0.	9.44	168249	02	
3	0.	10.72	85228	03	
TOTALS	0.		273025		

CHANNEL A INJECT 09/16/87 11:45:49

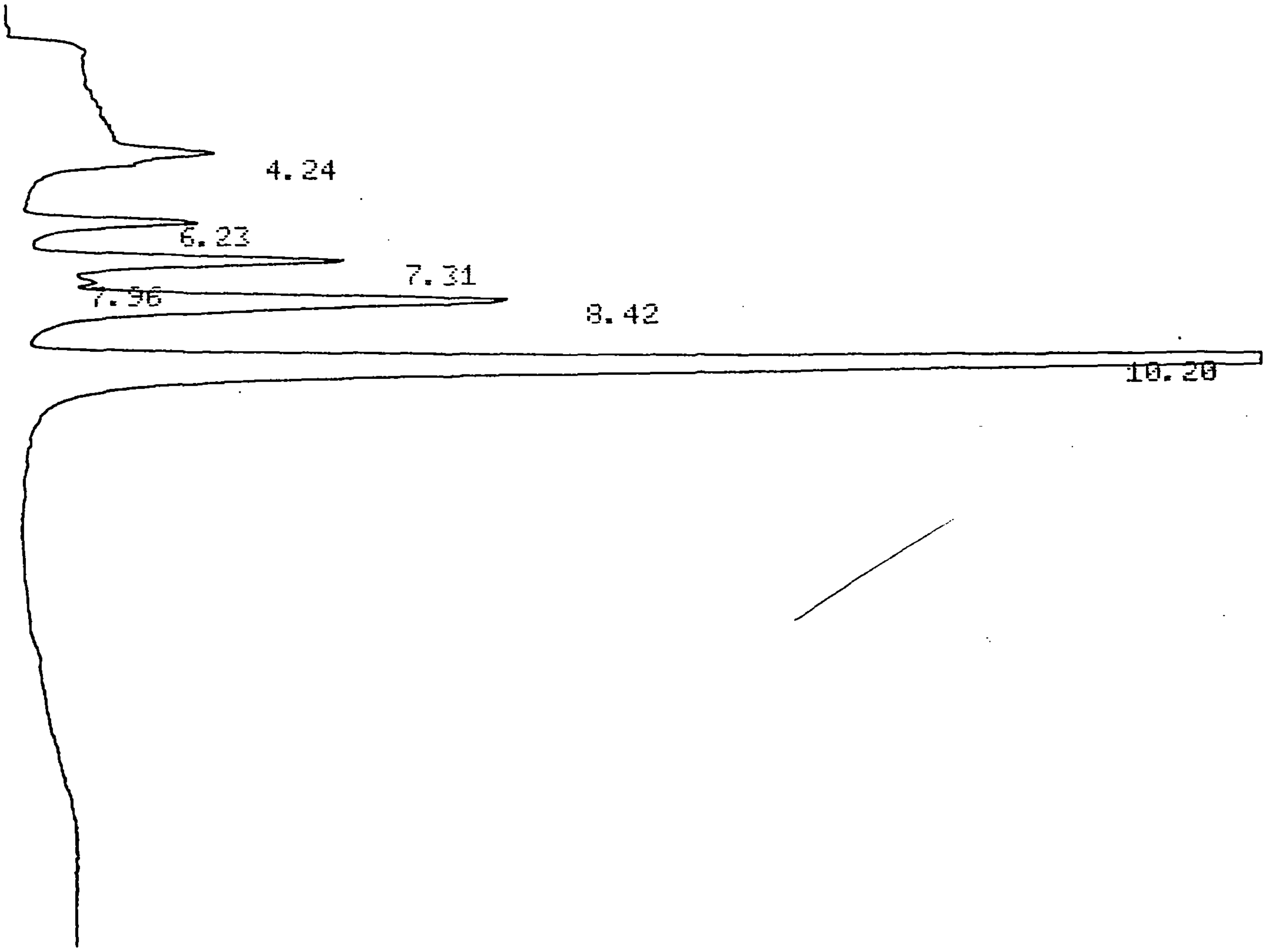
10ppb MEK Std



TOTALS 0. 148929

7082432 Neat ✝

CHANNEL A INJECT 09/10/87 11:02:14



HALL 09/10/87 11:02:14 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 599 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	4.24	1547470	01	
2	0.	6.23	649175	01	
3	0.	7.31	1287050	02	
4	0.	7.96	213837	02	
5	0.	8.42	2847397	03	
6	0.	10.2	11208150	01	
TOTALS	0.		17753079		

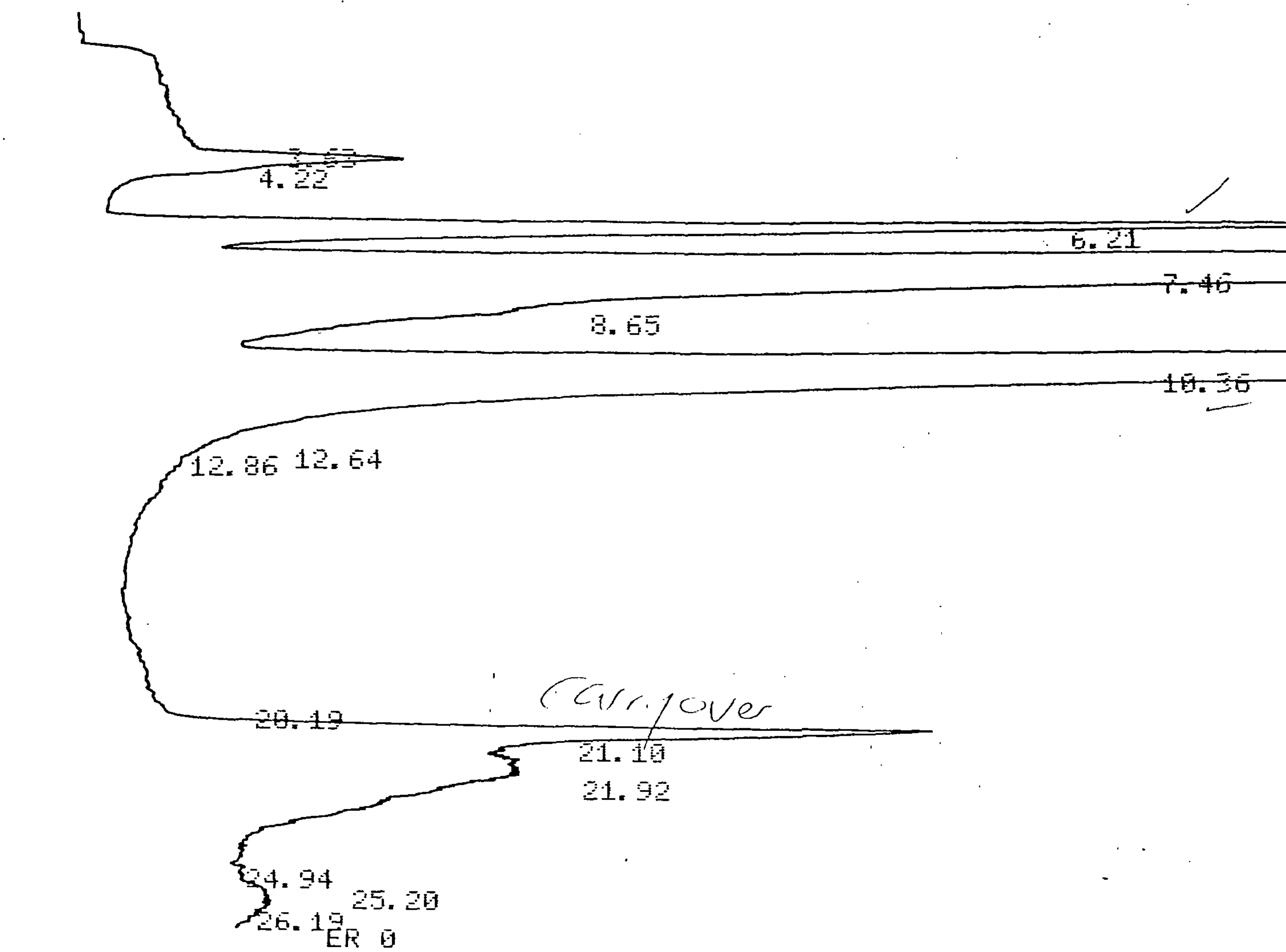
INPUT OVERRANGE AT RT= 4.72

PID 09/10/87 11:02:14 CH= "B" PS= 1.

y 3	0.	31.1	234737 01
TOTALS	0.		2987344

7082433
Neat

CHANNEL A   INJECT 09/10/87 13:47:59

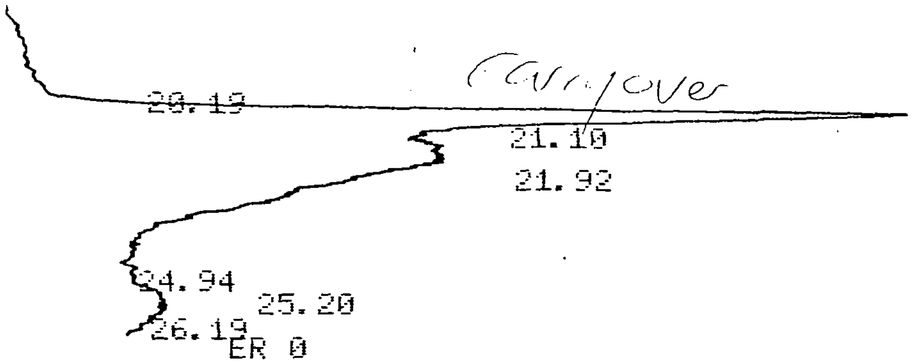


HALL   09/10/87 13:47:59   CH= "A"   PS= 1.

FILE 1.   METHOD 5.   RUN 603   INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	3.63	240674 02	
2	0.	4.22	1680743 03	
3	0.	6.21	[illegible]	



HALL 09/10/87 13:47:59 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 603 INDEX 1

ANALYST: KWK

7082433

NAME	PPB	RT	AREA	BC	RF
1	0.	3.63	240674	02	
2	0.	4.22	1680743	03	
3	0.	6.21	6131756	02	
4	0.	7.46	82428716	08	
5	0.	8.65	4279	05	
6	0.	10.36	70364243	06	
7	0.	12.64	25808	06	
8	0.	12.86	2180	07	
9	0.	20.19	11763	02	
10	0.	21.1	5366989	02	
11	0.	21.92	6449933	02	
12	0.	24.94	117612	02	
13	0.	25.2	89518	02	
14	0.	26.19	347862	03	
TOTALS	0.		173262076		

INPUT OVERRANGE AT RT= 4.73

PID 09/10/87 13:47:59 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 577 INDEX 1

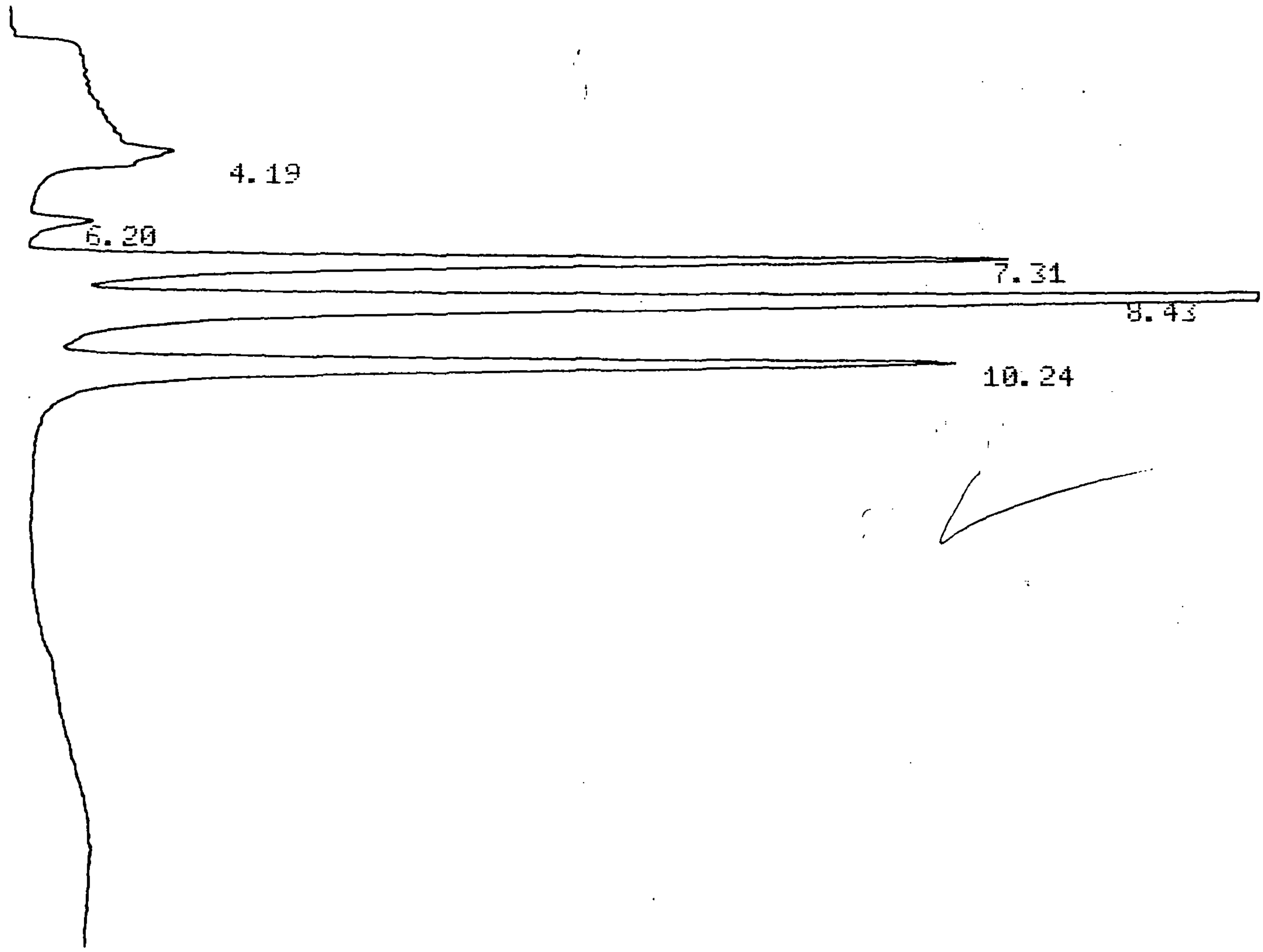
ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.54	7855	01	
2	0.	6.09	73167	01	
3	0.	9.42	139721	01	
4	0.	13.52	73064	01	
5	0.	20.48	325	02	
6	0.	20.96	271619	02	
7	0.	22.22	328822	03	
TOTALS	0.		894573		

1	0.	0.46	3936 01
2	0.	9.41	167782 01
TOTALS	0.		171718

250µ 7082433

CHANNEL A INJECT 09/09/87 22:53:07



HALL 09/09/87 22:53:07 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 582 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	4.19	1333152 01	
2	0.	6.2	220030 01	
3	0.	7.31	4564763 02	
4	0.	8.43	9363761 08	
5	0.	10.24	4598522 05	
TOTALS	0.		20080228	

INPUT OVERRANGE AT RT= 4.74

PID

FILE 1. METHOD 5. RUN 552 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	4.19	1333152 01	
2	0.	6.2	220030 01	
3	0.	7.31	4564763 02	
4	0.	8.43	9363761 08	
5	0.	10.24	4598522 05	
TOTALS	0.		20080228	

INPUT OVERRANGE AT RT= 4.74

PID 09/09/87 22:53:07 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 556 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	9.39	328538 01	
TOTALS	0.		328538	

CHANNEL A INJECT 09/09/87 23:35:07

7082434

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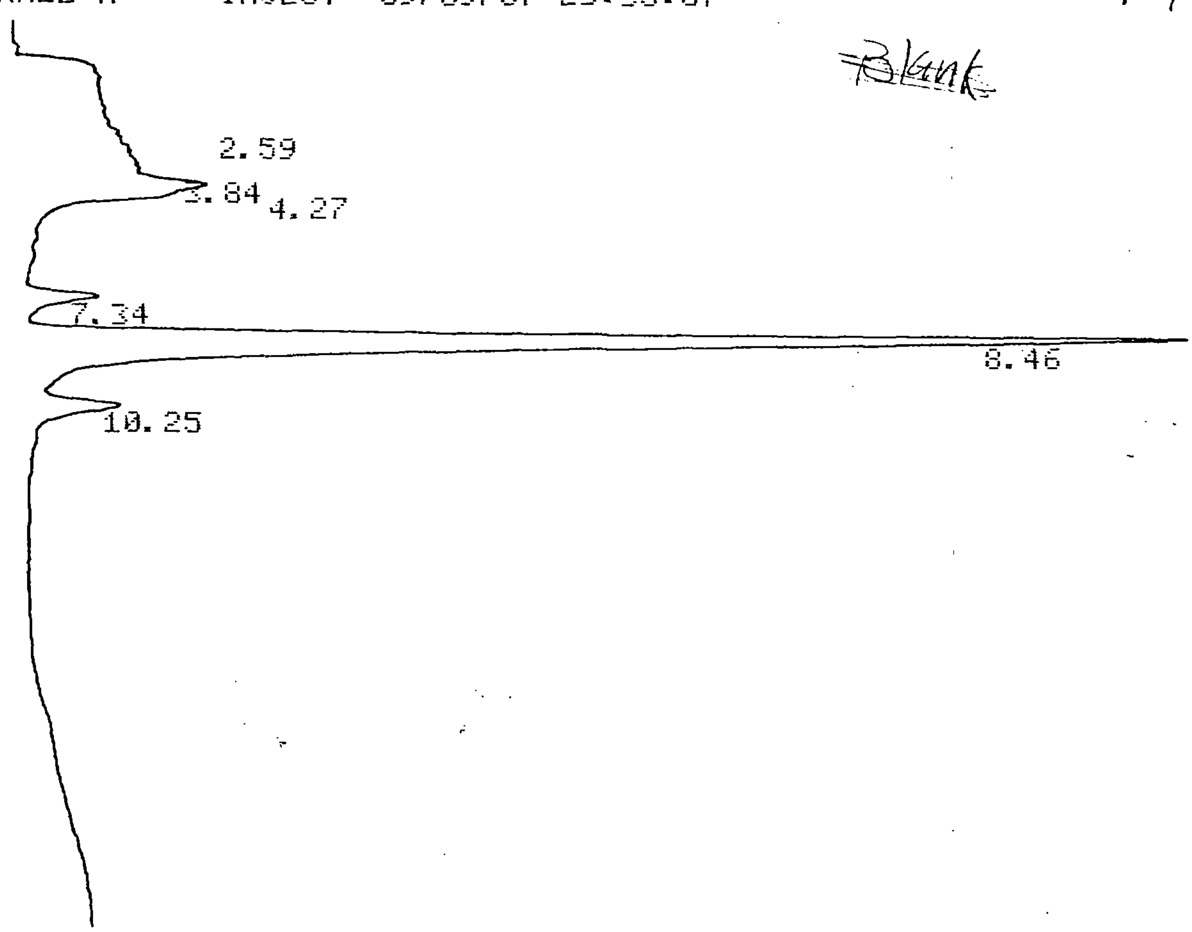
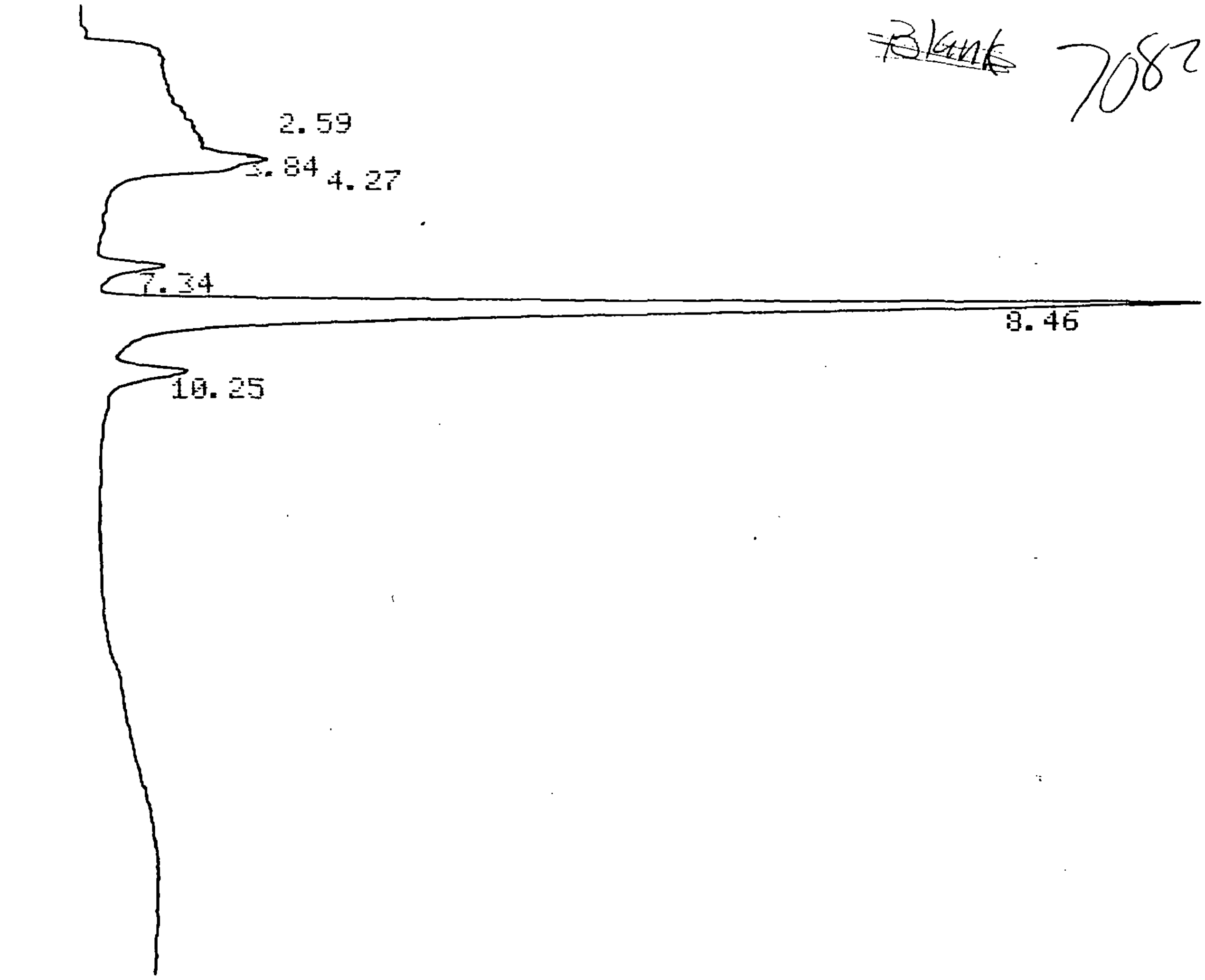


1082434

~~Blank~~ 7082434

CHANNEL A INJECT 09/09/87 23:35:07



HALL 09/09/87 23:35:07 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 583 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.59	1506289	02	
2	0.	3.84	1308976	02	
3	0.	4.27	1441143	03	
4	0.	7.34	250382	02	
5	0.	8.46	5799461	08	
6	0.	10.25	331441	05	
TOTALS	0.		10637692		

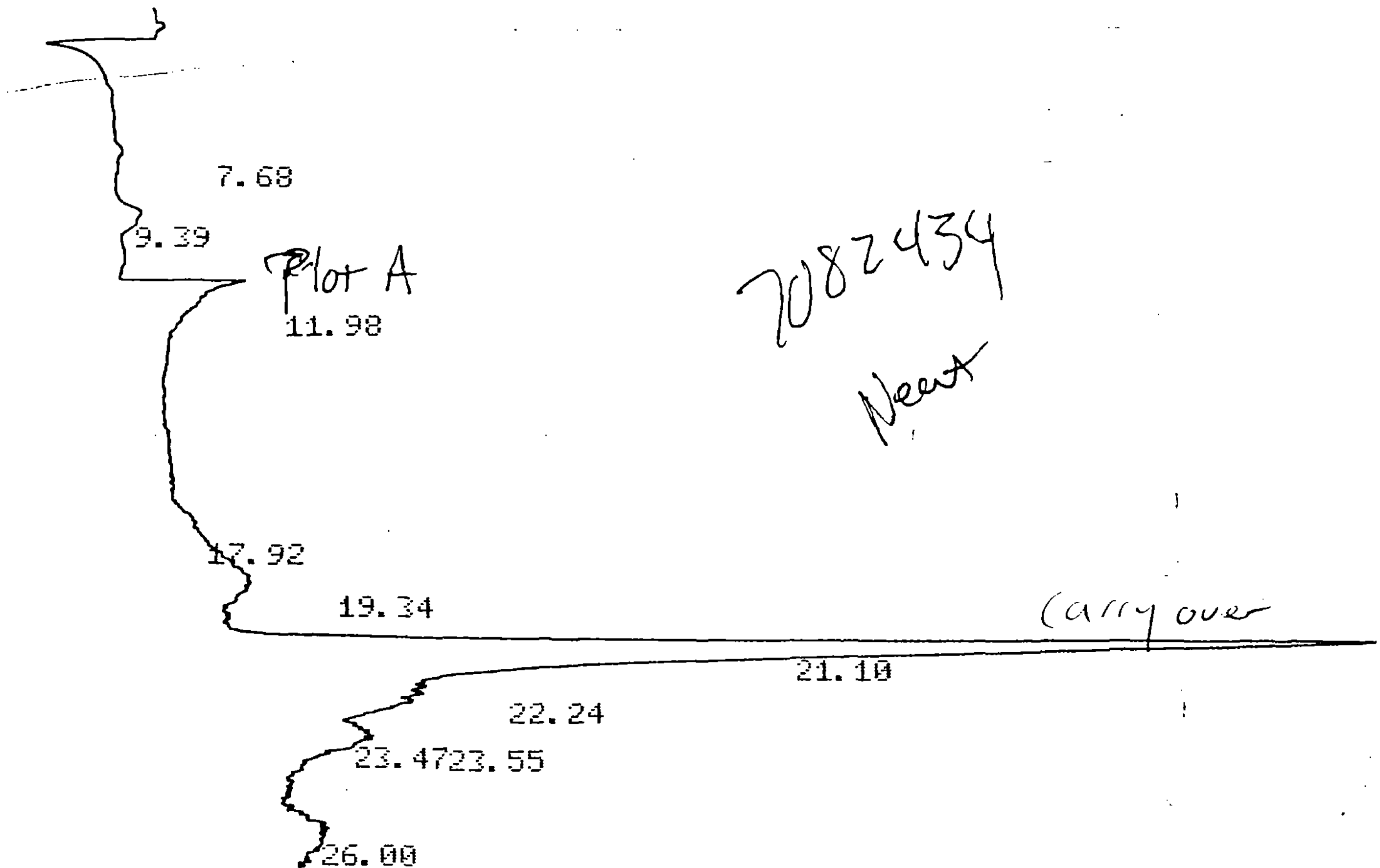
INPUT OVERRANGE AT RT= 4.72

PID 09/09/87 23:35:07 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 557 INDEX 1

ANALYST: KWK

CHANNEL B INJECT 09/10/87 13:05:47



ER 0

HALL 09/10/87 13:05:47 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 602 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.22	182301	02	
2	0.	1.61	229377	03	
3	0.	2.82	61139	01	
4	0.	4.25	920066	02	
5	0.	4.62	156155	03	
6	0.	5.74	78808	02	
7	0.	6.26	565417	02	
8	0.	7.32	8233213	02	
9	0.	8.48	1573931	02	
10	0.	9.31	9652	03	
11	0.	10.26	8546670	08	
12	0.	11.98	924	05	
13	0.	17.92	66301	02	
14	0.	19.34	671376	02	
15	0.	21.1	7549333	02	Carryover
16	0.	22.24	1341358	02	
17	0.	23.47	512224	02	
18	0.	23.55	704846	02	
19	0.	26.	269019	03	
TOTALS	0.		31672110		

INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.22	182301	02	
2	0.	1.61	229377	03	
3	0.	2.82	61139	01	
4	0.	4.25	920066	02	
5	0.	4.62	156155	03	
6	0.	5.74	78808	02	
7	0.	6.26	565417	02	
8	0.	7.32	8233213	02	
9	0.	8.48	1573931	02	
10	0.	9.31	9652	03	
11	0.	10.26	8546670	08	
12	0.	11.98	924	05	
13	0.	17.92	66301	02	
14	0.	19.34	671376	02	
15	0.	21.1	7549333	02	carryover
16	0.	22.24	1341358	02	
17	0.	23.47	512224	02	
18	0.	23.55	704846	02	
19	0.	26.	269019	03	
TOTALS	0.		31672110		

7082434

INPUT OVERRANGE AT RT= 4.72

PID 09/10/87 13:05:47 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 576 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	7.68	27059	01	
2	0.	9.39	154599	01	
3	0.	13.52	169988	01	
4	0.	20.38	19093	02	
5	0.	20.96	584726	02	
6	0.	22.14	1387677	02	
7	0.	22.99	409465	03	
8	0.	31.1	234737	01	
TOTALS	0.		2987344		

7082433
Next ↓

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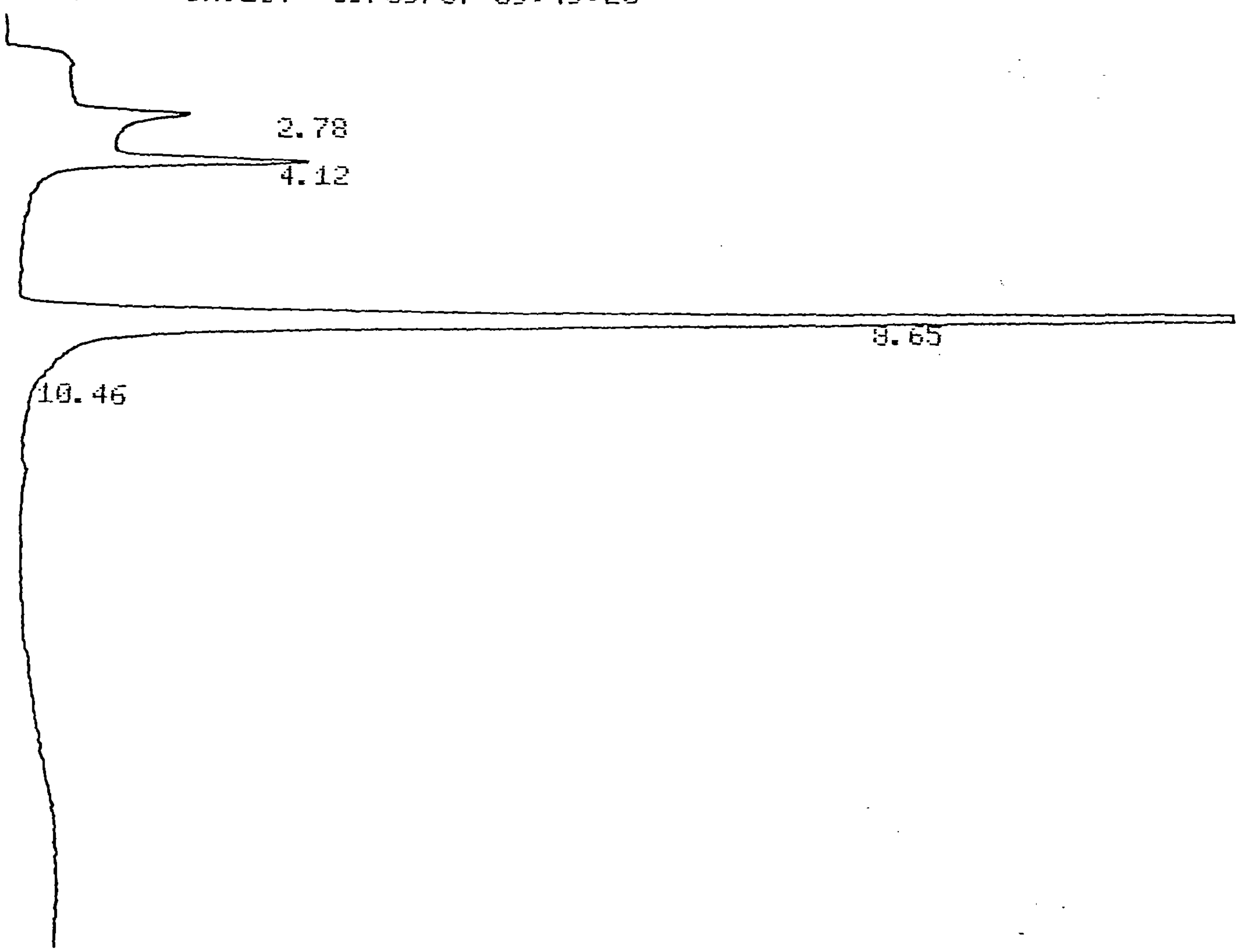
7082437
5ml

11 9

CHANNEL A INJECT 09/09/87 09:49:25



HALL 09/09/87 09:49:25 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 774 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.78	363741	01	
2	0.	4.12	683062	01	-
	0.	8.65	7694619	08	

HALL 09/09/87 09:49:25 CH= "A" PS= 1

FILE 1. METHOD 5. RUN 774 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	2.78	363741 01	
2	0.	4.12	683062 01	
3	0.	8.65	7694619 08	
4	0.	10.46	3024 05	
TOTALS	0.		8744446	

7082437

INPUT OVERRANGE AT RT= 4.28

PID 09/09/87 09:49:25 CH= "B" PS= 1.

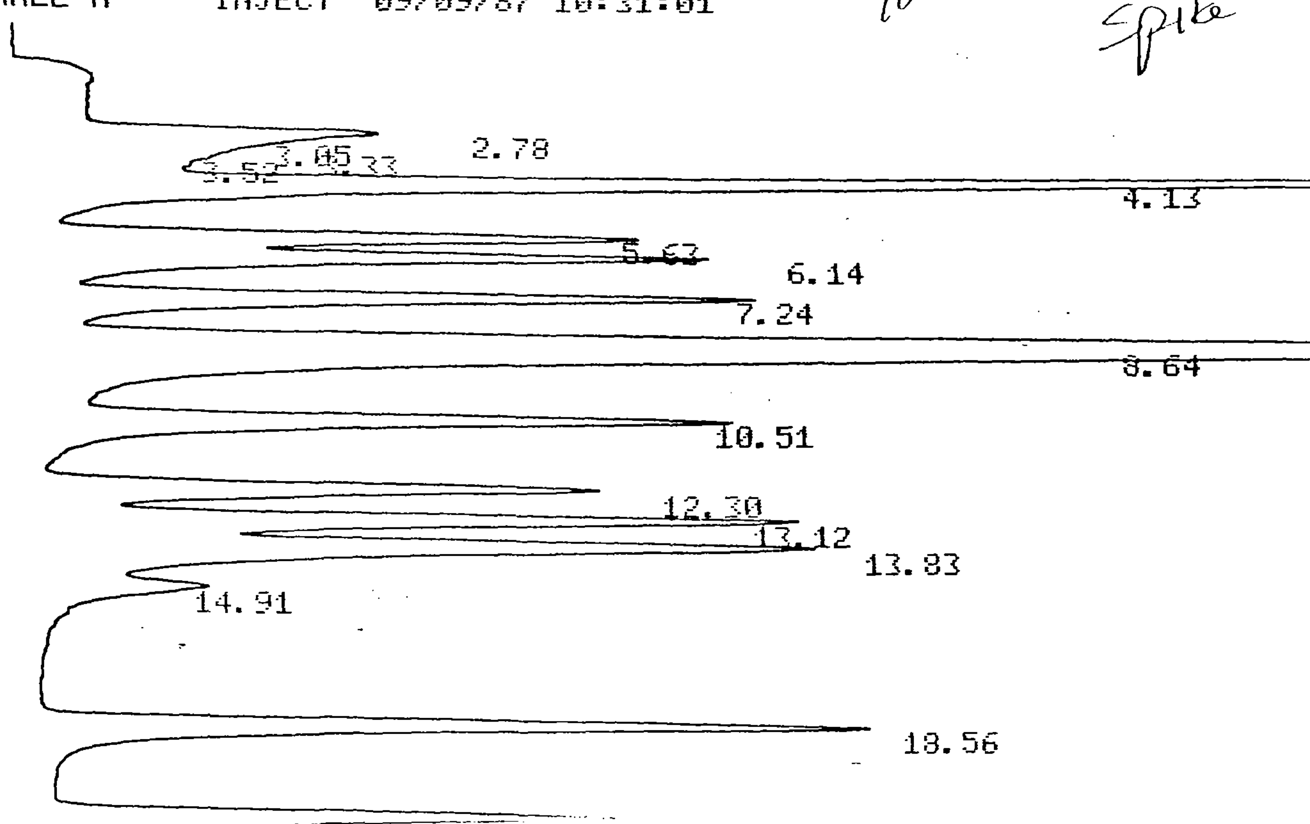
FILE 1. METHOD 5. RUN 744 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	4.56	318936 01	
2	0.	9.3	163624 01	
TOTALS	0.		482560	

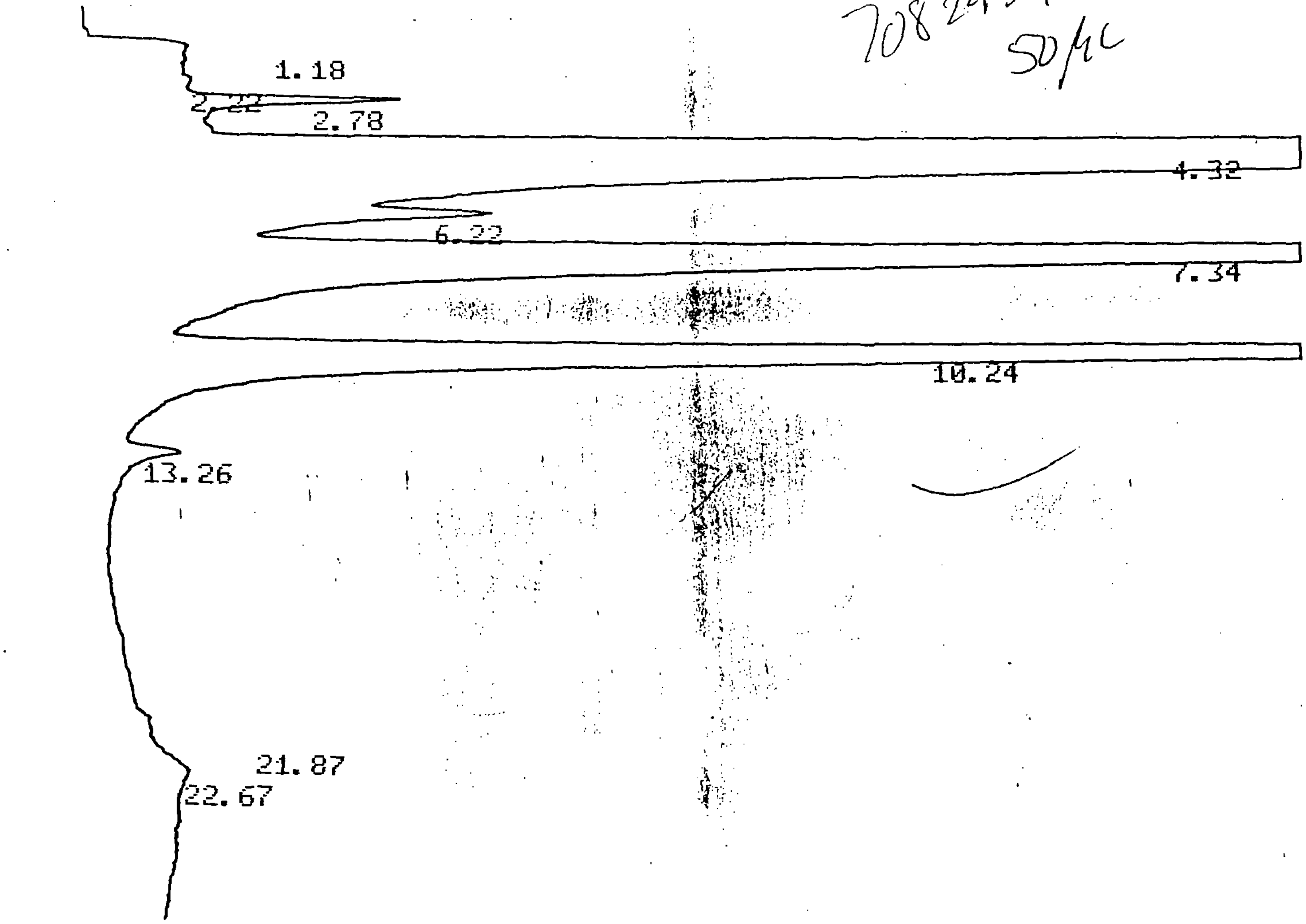
7082437 5ml Spike

CHANNEL A INJECT 09/09/87 10:31:01



CHANNEL A INJECT 09/11/87 08:02:14

7082437
50μL



HALL 09/11/87 08:02:14 CH= "A" PS= 1.

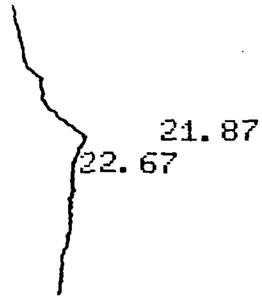
FILE 1. METHOD 5. RUN 622 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.18	1286537	02	
2	0.	2.22	510186	02	
3	0.	2.78	1842215	02	
4	0.	4.32	77866857	02	
5	0.	6.22	2893659	02	
6	0.	7.34	29242917	08	
7	0.	10.24	14931854	05	
8	0.	13.26	273631	05	
9	0.	21.87	21348	02	
10	0.	22.67	132992	03	
TOTALS	0.		129002196		

INPUT OVERRANGE AT RT= 4.17

PID



HALL 09/11/87 08:02:14 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 622 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.18	1286537	02	
2	0.	2.22	510186	02	
3	0.	2.78	1842215	02	
4	0.	4.32	77866857	02	7082437
5	0.	6.22	2893659	02	
6	0.	7.34	29242917	08	
7	0.	10.24	14931854	05	
8	0.	13.26	273631	05	
9	0.	21.87	21348	02	
10	0.	22.67	132992	03	
TOTALS	0.		129002196		

INPUT OVERRANGE AT RT= 4.17

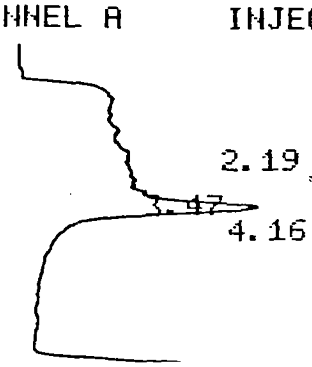
PID 09/11/87 08:02:14 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 596 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.7	202314	01	
TOTALS	0.		202314		

CHANNEL A INJECT 09/11/87 08:51:17

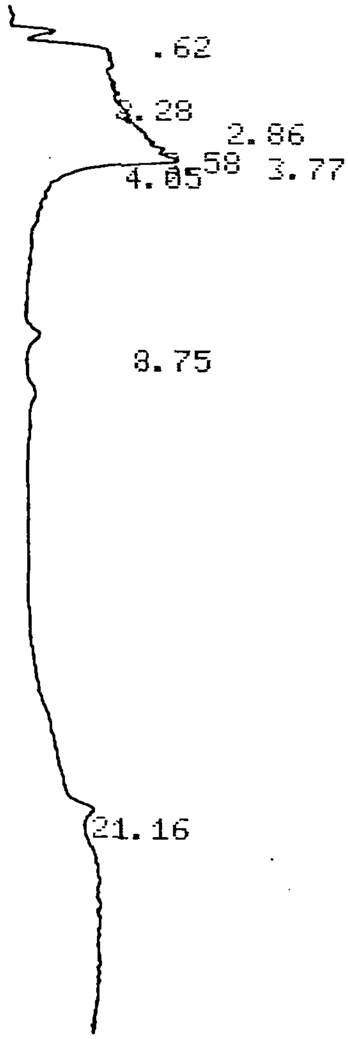


709182 FAC

SD

OTALS 0. 1421704

HANNEL A INJECT 09/10/87 23:58:10



7082438

HALL 09/10/87 23:58:10 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 617 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.62	74491	03	
2	0.	2.28	4043	01	
3	0.	2.86	92791	02	
4	0.	3.58	352171	02	
5	0.	3.77	191164	02	
6	0.	4.05	343469	03	
7	0.	8.75	56829	01	
8	0.	21.16	397501	01	
TOTALS	0.		1512459		

INPUT OVERRANGE AT RT= 4.17

113

HALL 09/10/87 23:58:10 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 617 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	0.62	74491 03	
2	0.	2.28	4043 01	
3	0.	2.86	92791 02	
4	0.	3.58	352171 02	
5	0.	3.77	191164 02	
6	0.	4.05	343469 03	
7	0.	8.75	56829 01	
8	0.	21.16	397501 01	
TOTALS	0.		1512459	

7082438

113

INPUT OVERRANGE AT RT= 4.17

PID 09/10/87 23:58:11 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 591 INDEX 1

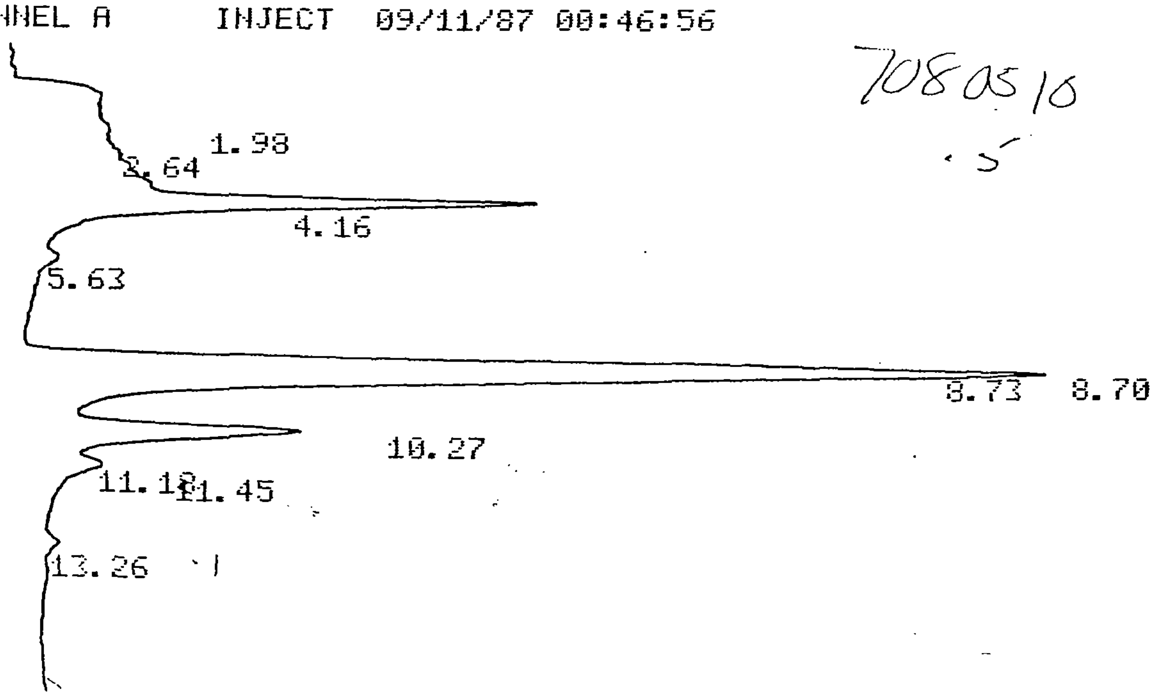
ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	9.68	175780 01	
2	0.	27.02	3811968 01	
TOTALS	0.		3987748	

CHANNEL A INJECT 09/11/87 00:46:56

7080510

.5



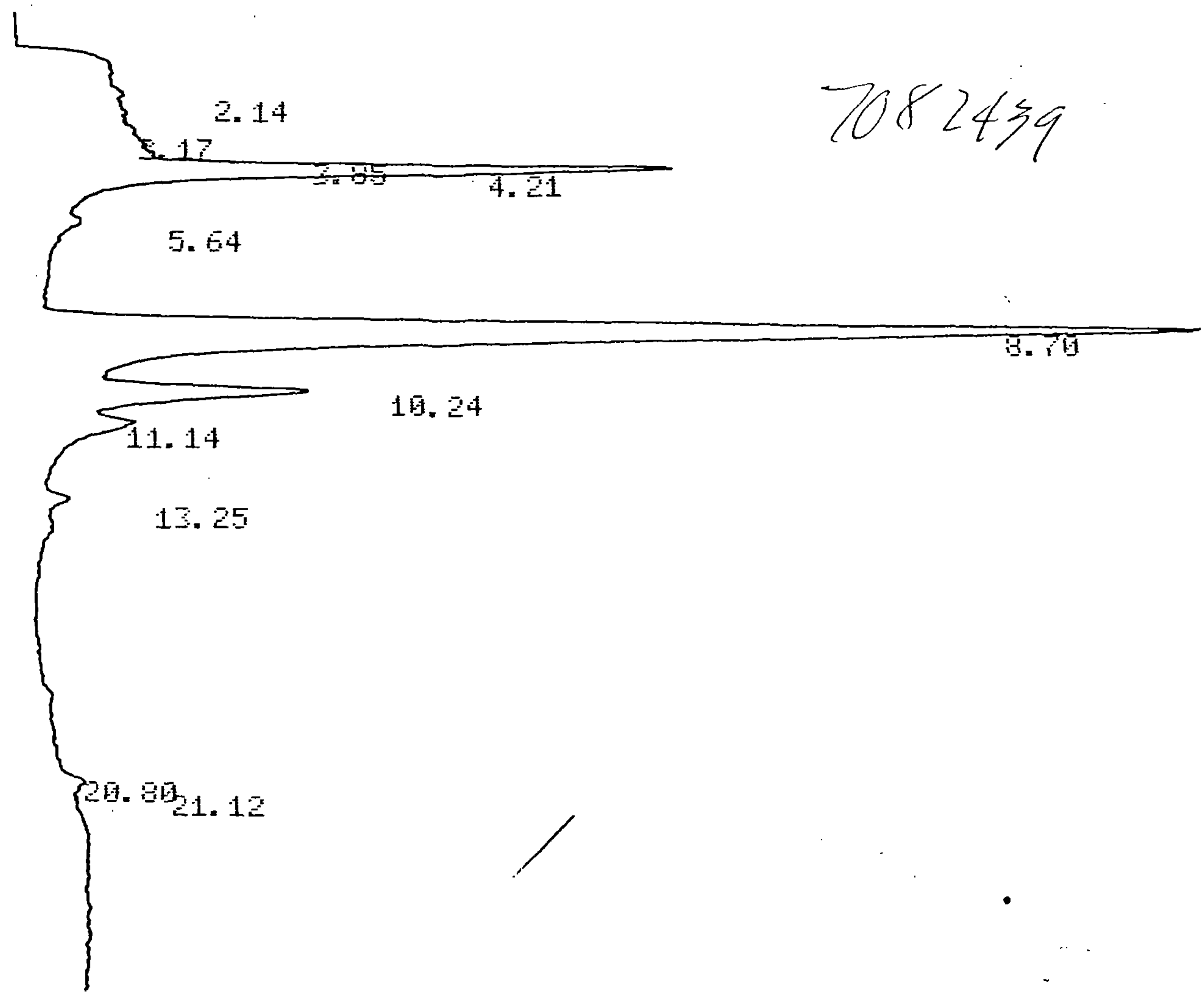
PID 09/10/87 22:39:33 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 589 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	9.63	128179 02	
2	0.	10.72	66226 03	
TOTALS	0.		194405	

CHANNEL A INJECT 09/10/87 23:15:09



7082439

HALL 09/10/87 23:15:09 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 616 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA BC	RF
1	0.	2.14	225821 02	
2	0.	3.17	314143 02	
3	0.	3.85	141210 02	

HALL 09/10/87 23:15:09 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 616 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.14	225821	02	
2	0.	3.17	314143	02	7082439
3	0.	3.85	141210	02	
4	0.	4.21	2534268	08	
5	0.	5.64	50763	05	
6	0.	8.7	7767848	02	
7	0.	10.24	1447857	02	
8	0.	11.14	569432	03	
9	0.	13.25	63310	01	
10	0.	20.8	10178	02	
11	0.	21.12	56733	03	
TOTALS	0.		13181563		

INPUT OVERRANGE AT RT= 4.43

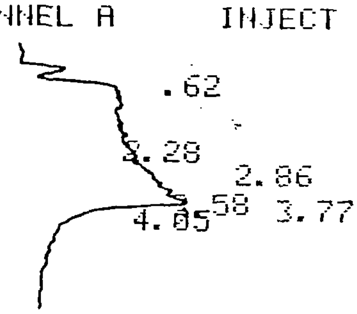
PID 09/10/87 23:15:09 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 590 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.63	139154	02	
2	0.	10.72	72967	03	
3	0.	20.67	43729	02	
4	0.	21.6	129831	02	
5	0.	23.66	1036023	03	
TOTALS	0.		1421704		

CHANNEL A INJECT 09/10/87 23:58:10



7082438

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/30/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: J. Schwarz
Date of Analysis: 9/11/87
Method of Analysis: EPA 604
Detection Limit: 1.0
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092431	2 Chlorophenol	< 1	< 1	0.0

Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092431	2 Chloro-phenol	< 1	68	74	109

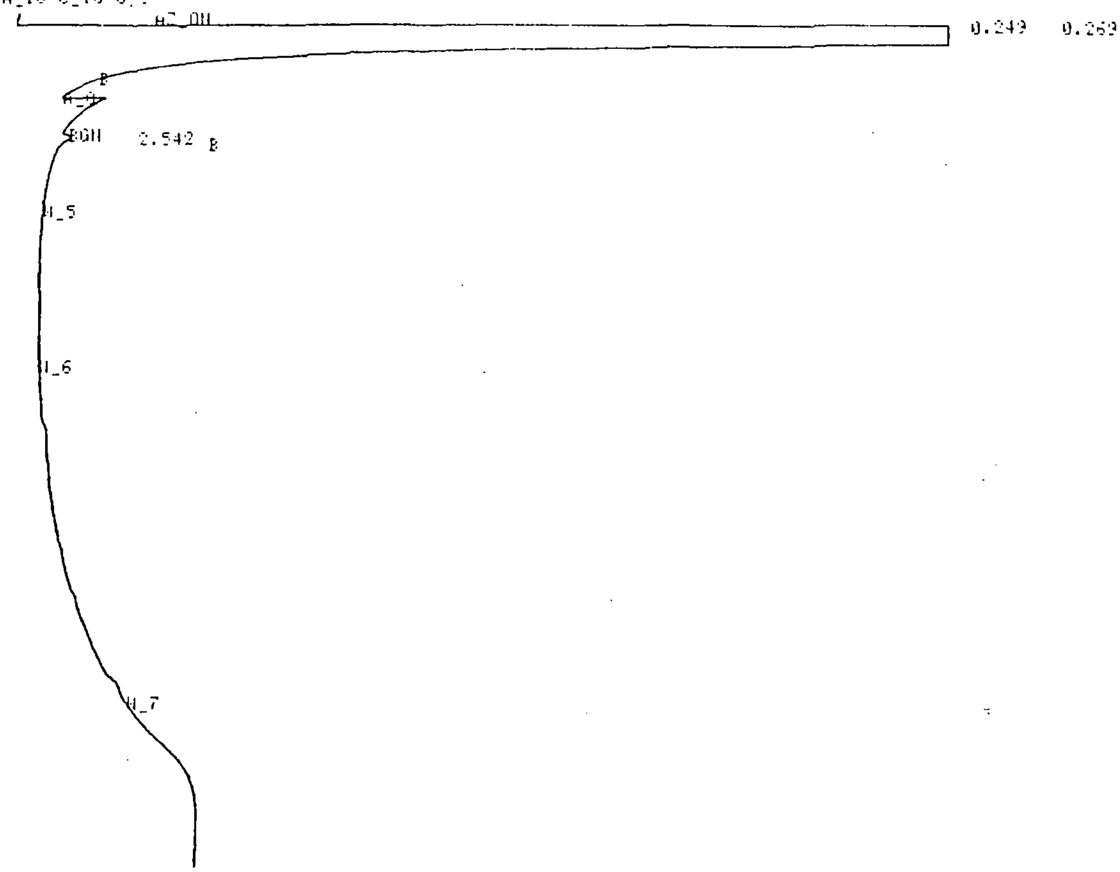
SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

700 → 2 ml 604 / 5λ

Blank

W_4 A_16 C_10 O_5



16

FILE 91   RUN 78   STARTED 12:53.0 80/01/05
% METHOD 1 HIGH BOILERS   LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
2.542	5569	0.7507		100.0000	100.0000

1 PEAK > AREA REJECT 5569 TOTAL AREA
1 PEAK > HEIGHT REJECT 0.7507 TOTAL HEIGHT

KEYBOARD DIRECTED EVENTS

TIME	EVENT	VALUE
1.741	Attn	8
17.447	Stop Data	

FILE 92   RUN 79   STARTED 13:13.6 80/01/05
% METHOD 1 HIGH BOILERS   LAST EDITED 14:36.1 80/01/02

W_4 A_16 C_10 O_5
AZ_ON

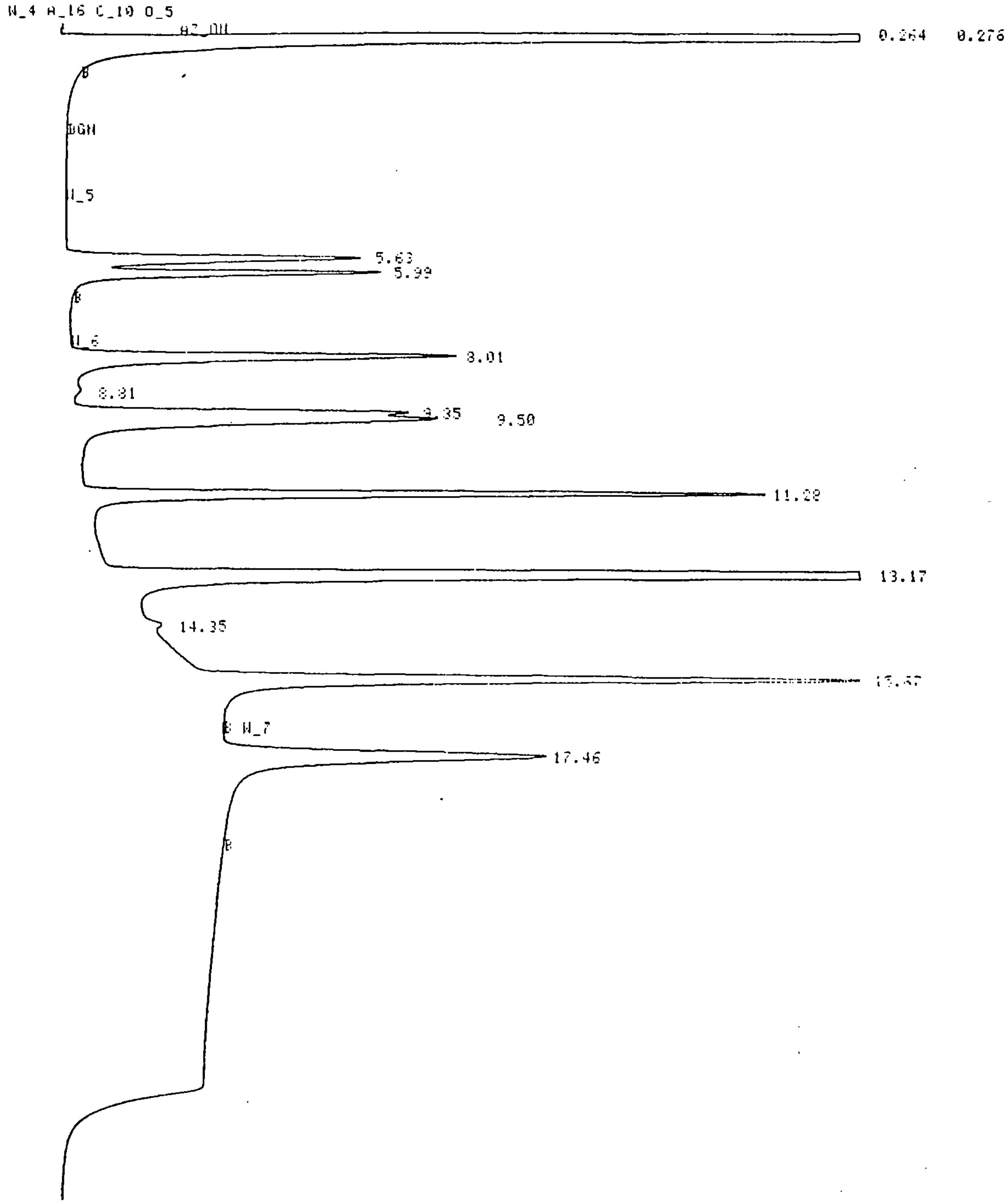
FILE 92   RUN 79   STARTED 13:13.6 80/01/05
% METHOD 1 HIGH BOILERS   LAST EDITED 14:36.1 80/01/02

0 PEAKS > AREA REJECT 0 TOTAL AREA
0 PEAKS > HEIGHT REJECT 0.0000 TOTAL HEIGHT

KEYBOARD DIRECTED EVENTS

TIME	EVENT	VALUE
0.332	Stop Data	

1 X AE mix STD Phenols

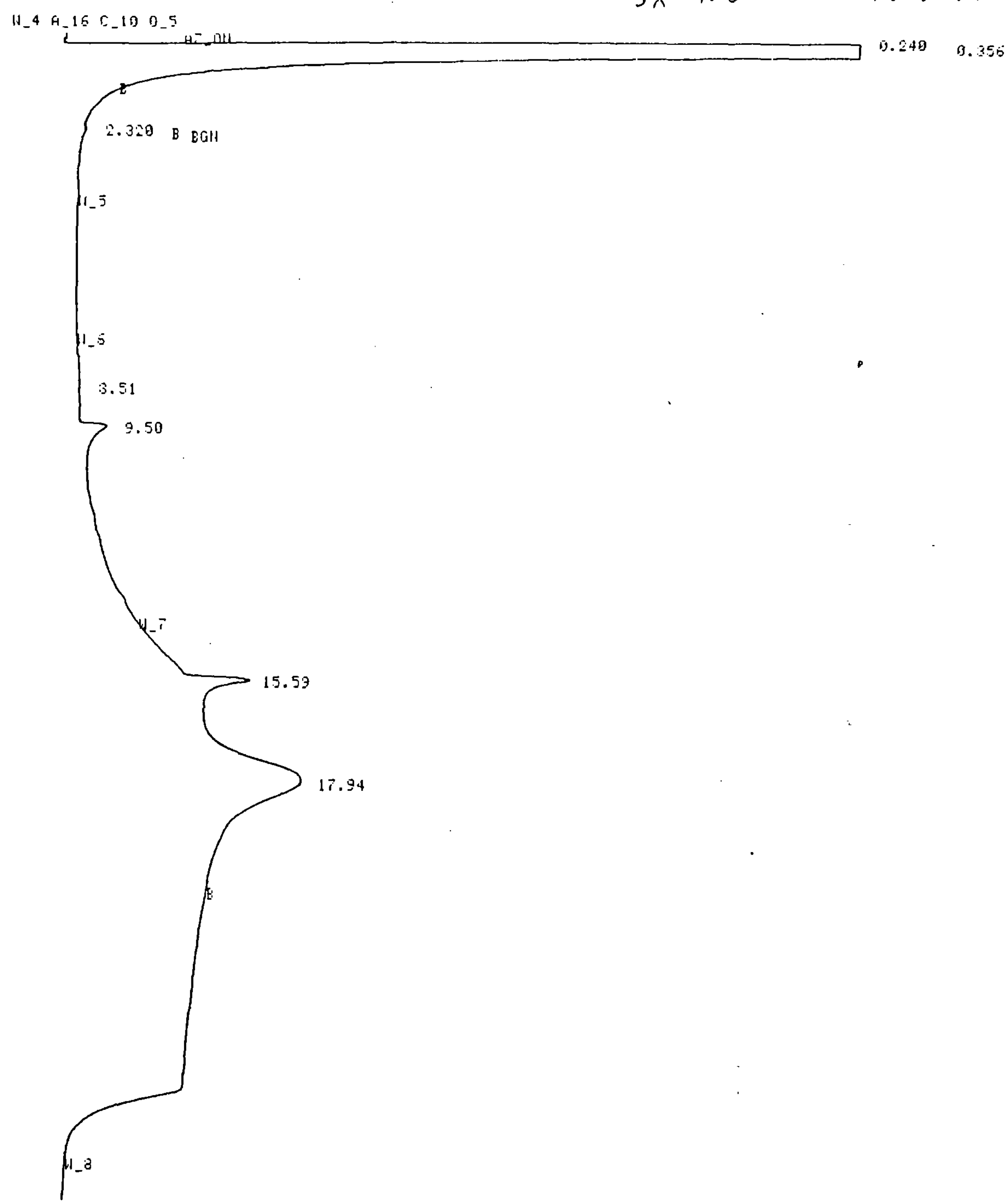


FILE 75 RUN 63 STARTED 21:40.2 80/01/04
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
5.63	486568	50.0344	V	5.1310	5.9915
5.99	419904	52.6086		4.4039	6.2998
8.01	930068	73.0601	V	9.7677	8.7488
8.81	8526	0.8327	V	0.0895	0.0997
9.35		14.5881	V		1.7469
9.50		13.7869	V		1.6509
11.28	1247897	128.7807	V	13.1003	15.4212
13.17	3313362	309.5433	V	34.8026	37.0676
14.35	5443	1.7658	V	0.0572	0.2115
15.67	1841575	128.3249		19.3404	15.4265
17.46	1266550	61.2597		13.3015	7.3357

9 PEAKS > AREA REJECT 9521392 TOTAL AREA
11 PEAKS > HEIGHT REJECT 835.0962 TOTAL HEIGHT

3λ 70824:27 700ml → 2ml Extract.

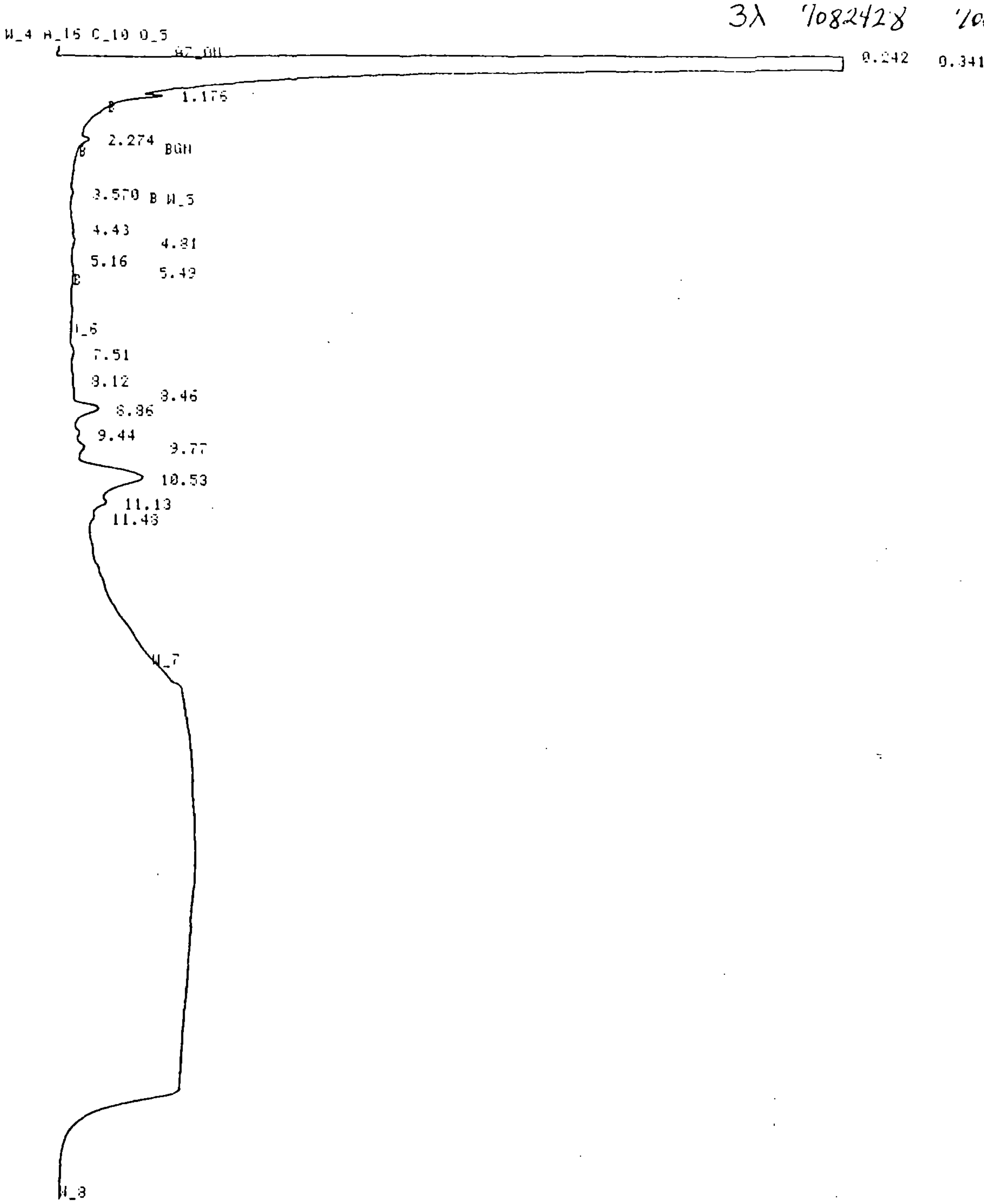


FILE 76 RUN 64 STARTED 22:26.3 80/01/04
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
8.51	1738	0.1618	V	0.0943	0.4430
9.50	103460	4.9203	V	5.6128	13.4731
15.59	233764	12.8289	V	12.6819	35.1333
17.94	1504332	18.5983		81.6111	50.9406

4 PEAKS > AREA REJECT 1843294 TOTAL AREA
4 PEAKS > HEIGHT REJECT 36.5098 TOTAL HEIGHT

3λ 7082428 200ml → 2ml

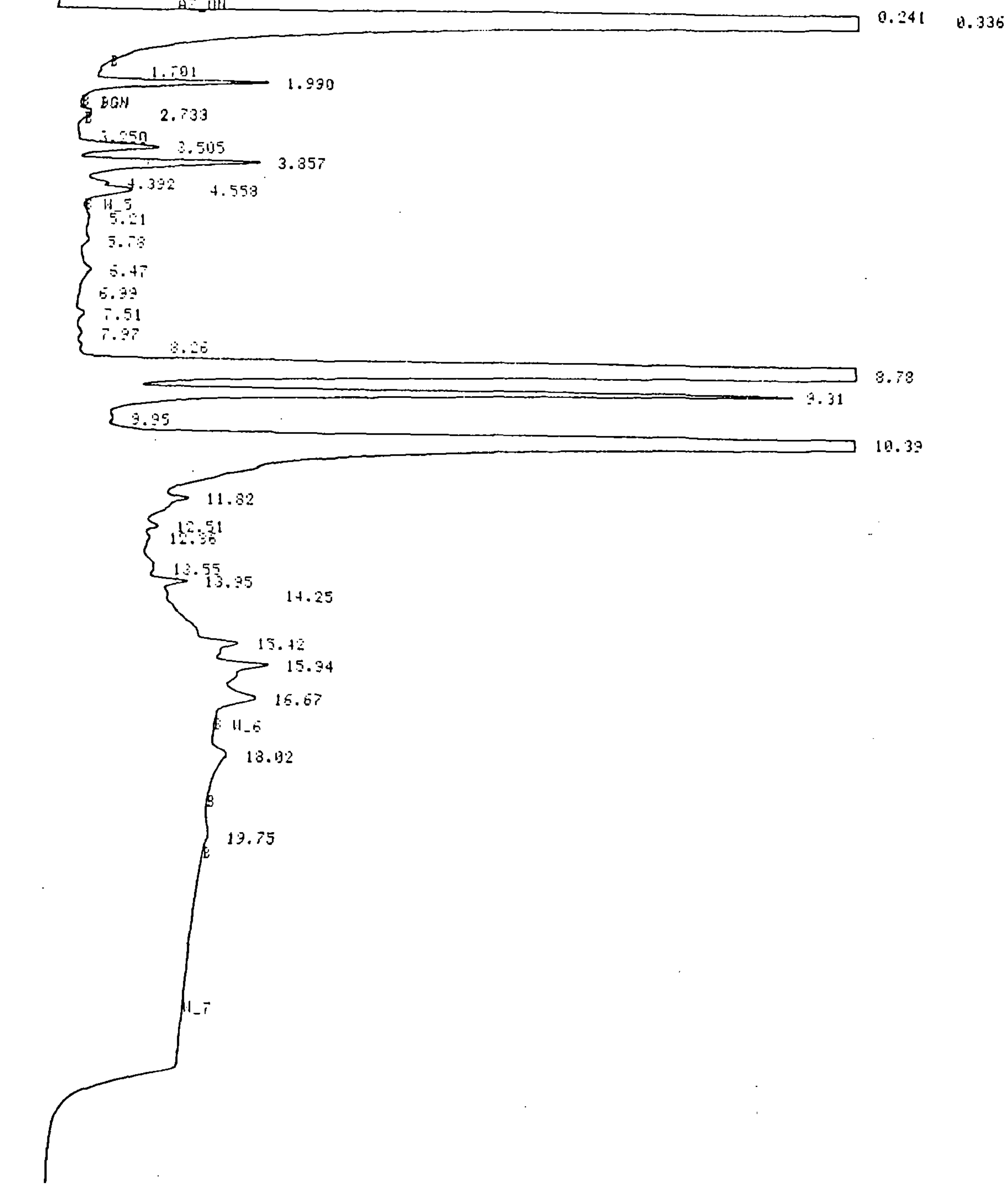


FILE 77 RUN 65 STARTED 23:02.3 80/01/04
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
3.570	3369	0.4082		0.8373	1.9475
4.43	3036	0.2419	V	0.7545	1.1540
4.81	5897	0.5230	V	1.4655	2.4953
5.16	349	0.0437	V	0.0867	0.2087
5.49	4063	0.3254		1.0097	1.5524
7.51	8551	0.6813	V	2.1251	3.2507
8.12	1998	0.2241	V	0.4966	1.0695
8.46	2343	0.2695	V	0.5823	1.2309
8.86	74346	4.6837	V	18.4766	22.3475
9.44	6456	0.7559	V	1.6043	3.6063
9.77	14754	1.2888	V	3.6667	6.1495
10.53	265033	9.8626	V	65.8664	47.0578
11.13	10740	1.2748	V	2.6690	6.0824
11.48	1445	0.3766	V	0.3591	1.7968

14 PEAKS > AREA REJECT 402379 TOTAL AREA
14 PEAKS > HEIGHT REJECT 20.9564 TOTAL HEIGHT

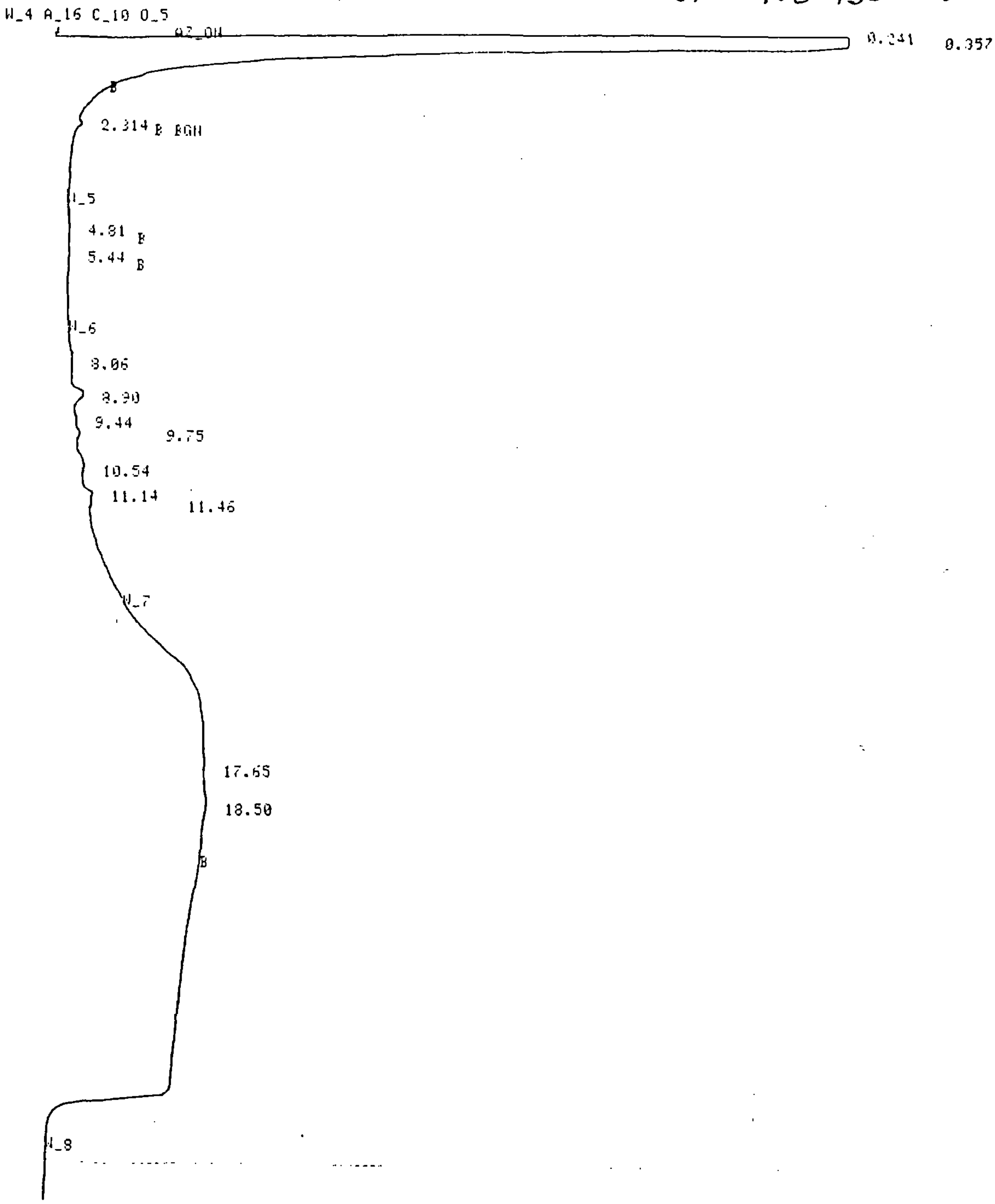
3λ 7082429 100 → 2 ml



FILE 78 RUN 66 STARTED 23:36.9 80/01/04
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
2.733	20098	1.8203		0.1277	0.1686
3.250	780	0.1620	V	0.0050	0.0150
3.505	153553	14.9042	V	0.9753	1.3803
3.857	347046	33.6325	V	2.2043	3.1147
4.392	8067	1.5252	V	0.0512	0.1412
4.558	66494	6.0805		0.4223	0.5631
5.21	16815	0.8584	V	0.1068	0.0795
5.78	13287	1.0942	V	0.0844	0.1013
6.47	25484	1.6937	V	0.1619	0.1569
6.99	2947	0.2097	V	0.0187	2.0121
7.51	15086	1.4384	V	0.0958	0.1332
7.97	7317	0.7639	V	0.0465	0.0707
8.26	3860	0.6036	V	0.0245	0.0559
8.78	7244102	495.0818	V	46.0113	45.8494
9.31	1247605	124.4547	V	7.9243	11.5257
9.95	4894	0.6185	V	0.0311	0.0573
10.39	5957623	354.4229	V	37.8406	32.8230
11.82	81098	4.9576	V	0.5151	0.4591
12.51	20149	2.0340	V	0.1280	0.1884
12.86	12107	0.9233	V	0.0769	0.0855
13.55	20067	1.0853	V	0.1275	0.1005
13.95	49880	5.5324	V	0.3168	0.5124
14.25	3476	0.4681	V	0.0221	0.0433
15.42	84946	6.2114	V	0.5395	0.5752
15.94	121619	9.2345	V	0.6277	0.8552

3λ 7082430 200 → 2ml

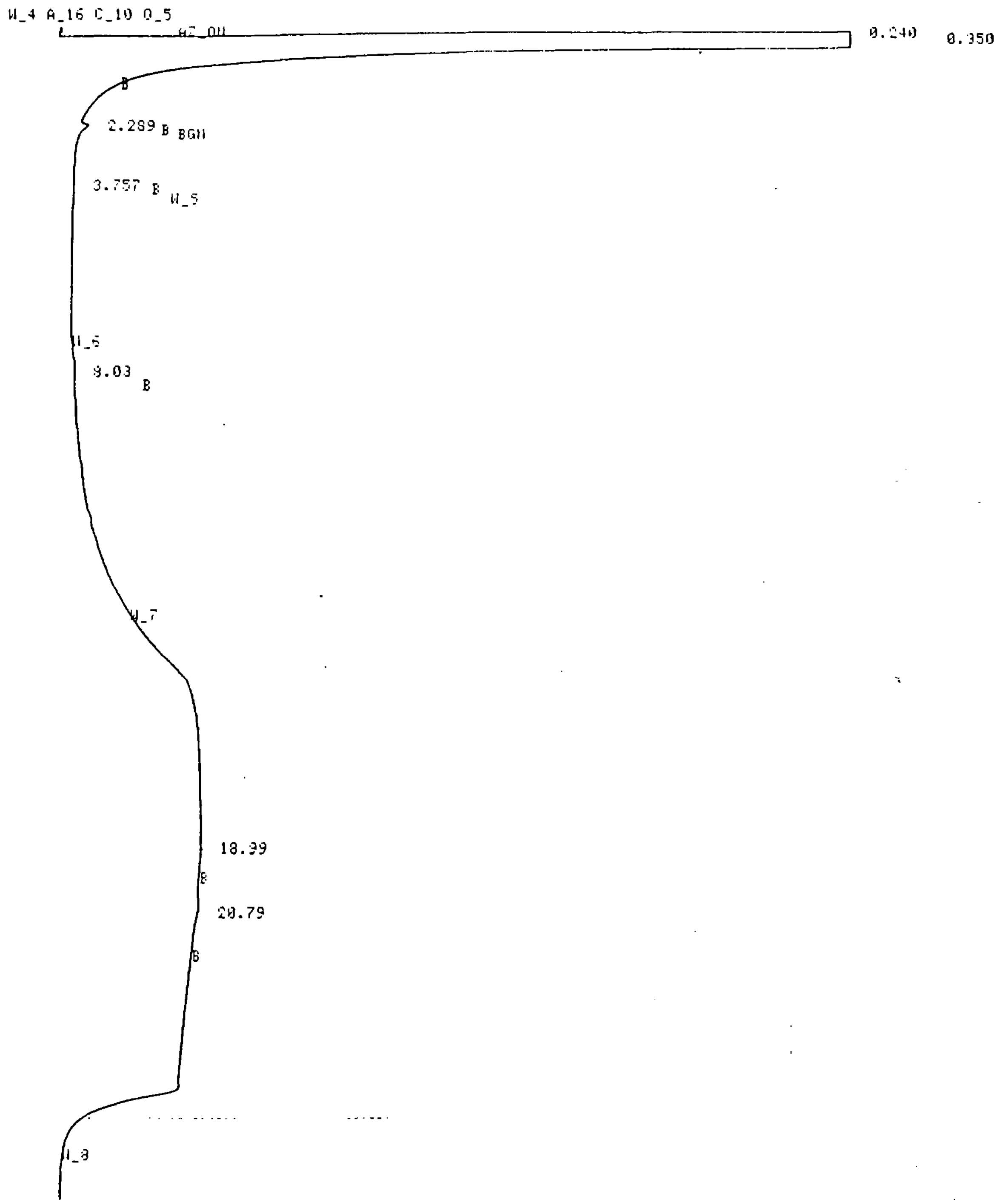


FILE 79 RUN 67 STARTED 00:12.8 80/01/05
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
4.81	2318	0.1916		0.2449	2.4943
5.44	2145	0.1869		0.2267	2.4333
8.06	8009	0.3901	V	0.8462	5.0783
8.90	31858	2.0716	V	3.3662	26.9677
9.44	2633	0.3118	V	0.2782	4.0592
9.75	8742	0.7050	V	0.9239	9.1777
10.54	14292	0.5985	V	1.5101	7.7909
11.14	7245	1.0096	V	0.7655	13.1435
11.46	1823	0.3036	V	0.1926	3.9516
17.65	835403	1.1717	V	88.2717	15.2528
18.50	31931	0.7413		3.3739	9.6507

11 PEAKS > AREA REJECT 946399 TOTAL AREA
11 PEAKS > HEIGHT REJECT 7.6817 TOTAL HEIGHT

3λ 7082431 700 → 2 ml



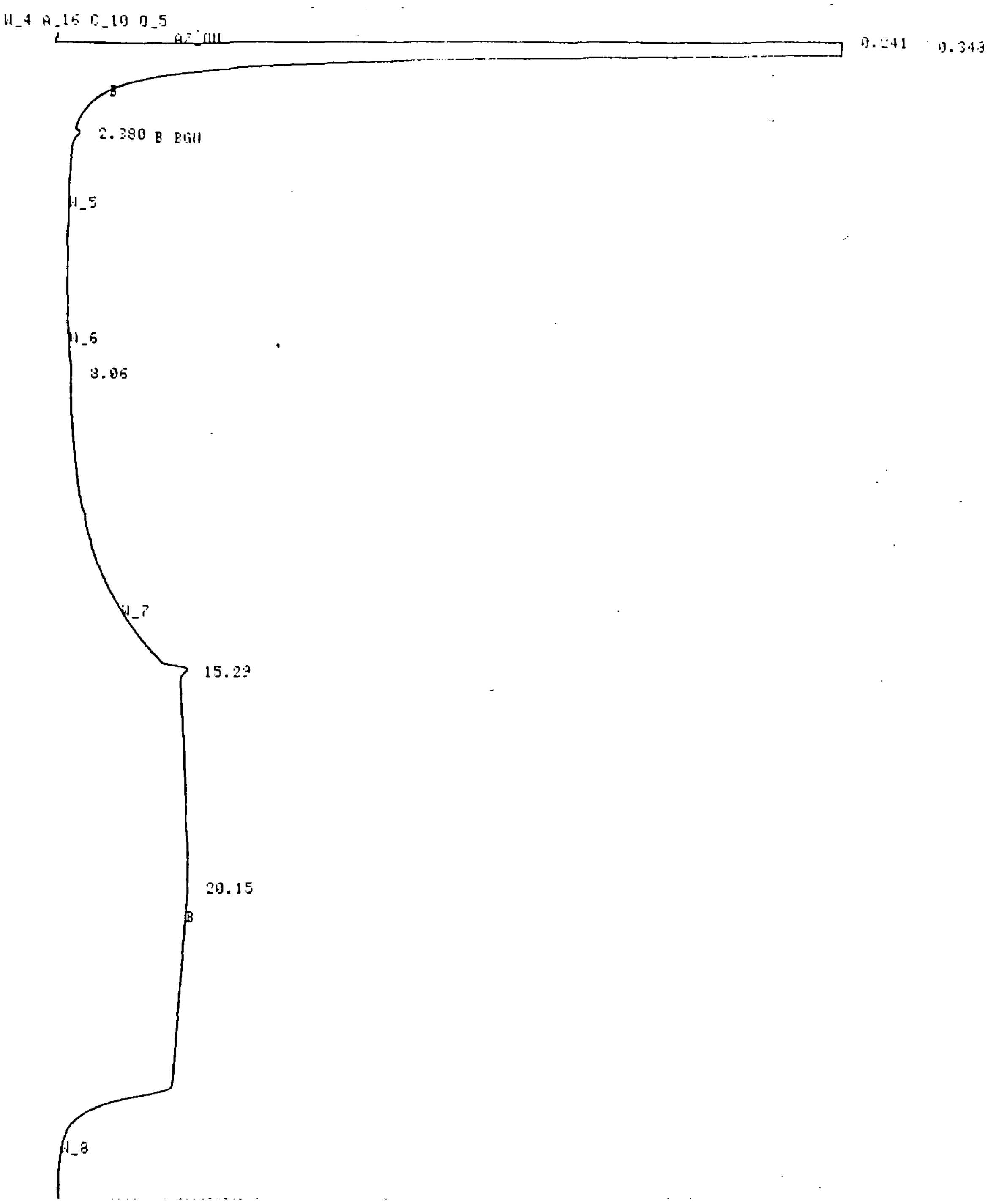
6

FILE 80 RUN 68 STARTED 00:49.9 80/01/05
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
3.757	497	0.1302		1.5970	13.7410
8.03	5944	0.3107		19.1165	32.7923
18.99	13964	0.1653		44.9139	17.4491
20.79	10686	0.3412		34.3705	36.0176

4 PEAKS > AREA REJECT 31091 TOTAL AREA
4 PEAKS > HEIGHT REJECT 0.9474 TOTAL HEIGHT

3x 7082432 700 → 2ml

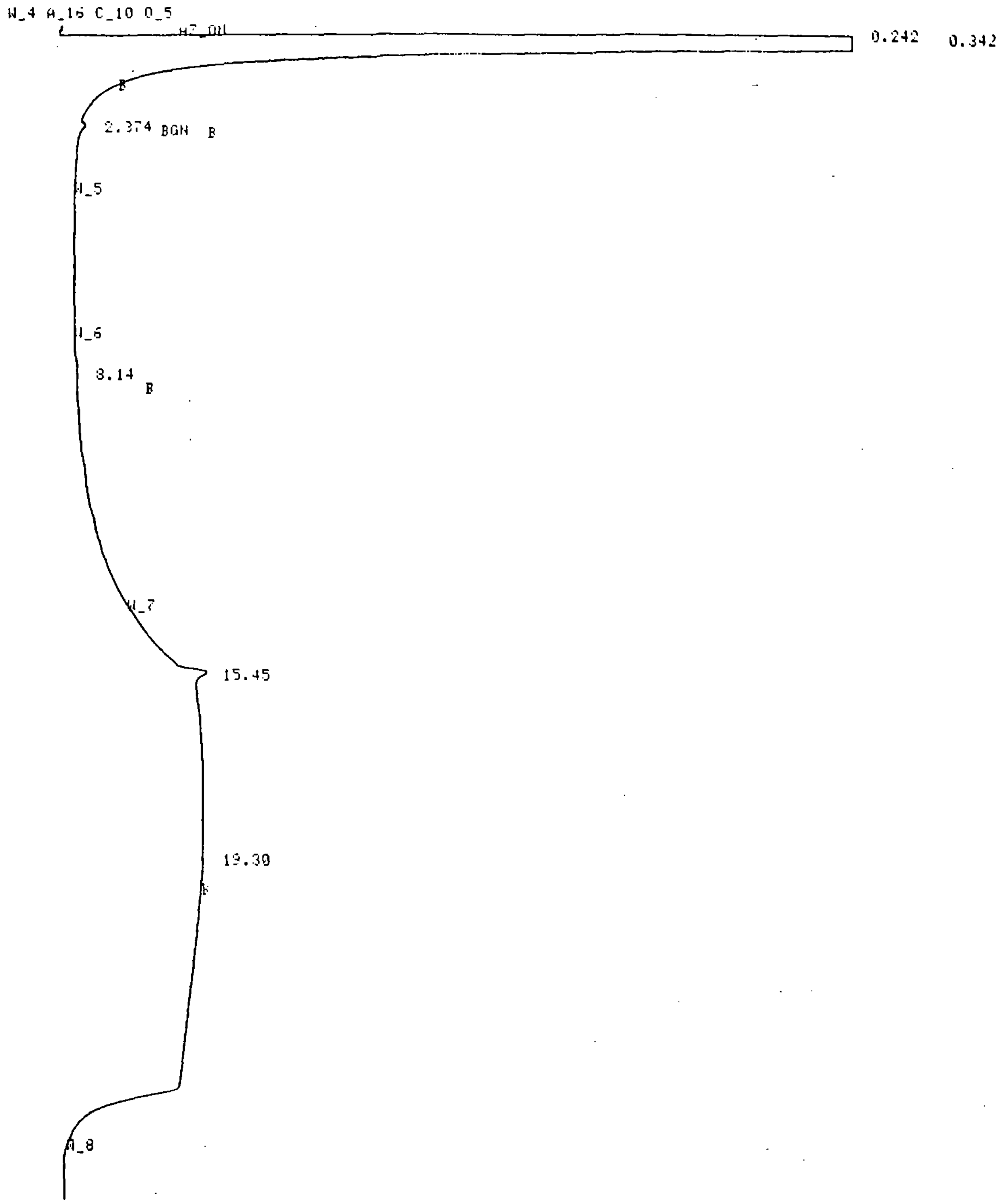


FILE 81 RUN 69 STARTED 01:24.8 80/01/05
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
8.06	1476	0.1774	V	10.6532	4.3861
15.29	1916	3.6777	V	13.8305	90.9364
20.15	10463	0.1892		75.5163	4.6775

3 PEAKS > AREA REJECT 13855 TOTAL AREA
3 PEAKS > HEIGHT REJECT 4.0443 TOTAL HEIGHT

3x 7082433 700 → 2ml

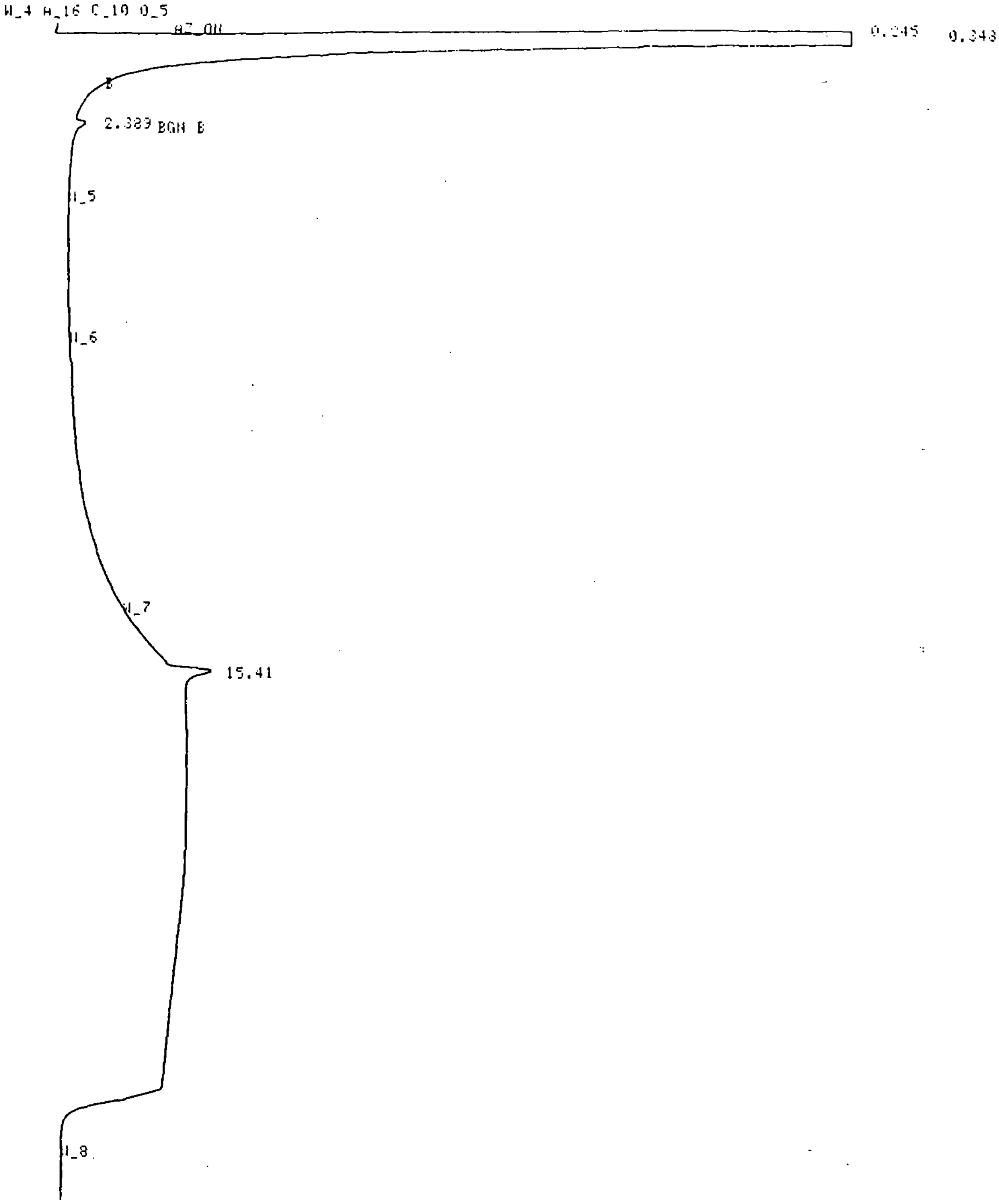


FILE 32 RUN 70 STARTED 01:58.9 80/01 05
% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT BC	AREA PERCENT	HEIGHT PERCENT
8.14	5409	0.2573	25.2625	5.3293
15.45	912	4.3657 V	4.2606	90.4280
19.30	15090	0.2048	70.4769	4.2427

3 PEAKS > AREA REJECT 21411 TOTAL AREA
3 PEAKS > HEIGHT REJECT 4.8279 TOTAL HEIGHT

3λ 1082434 700 → 2ml



9

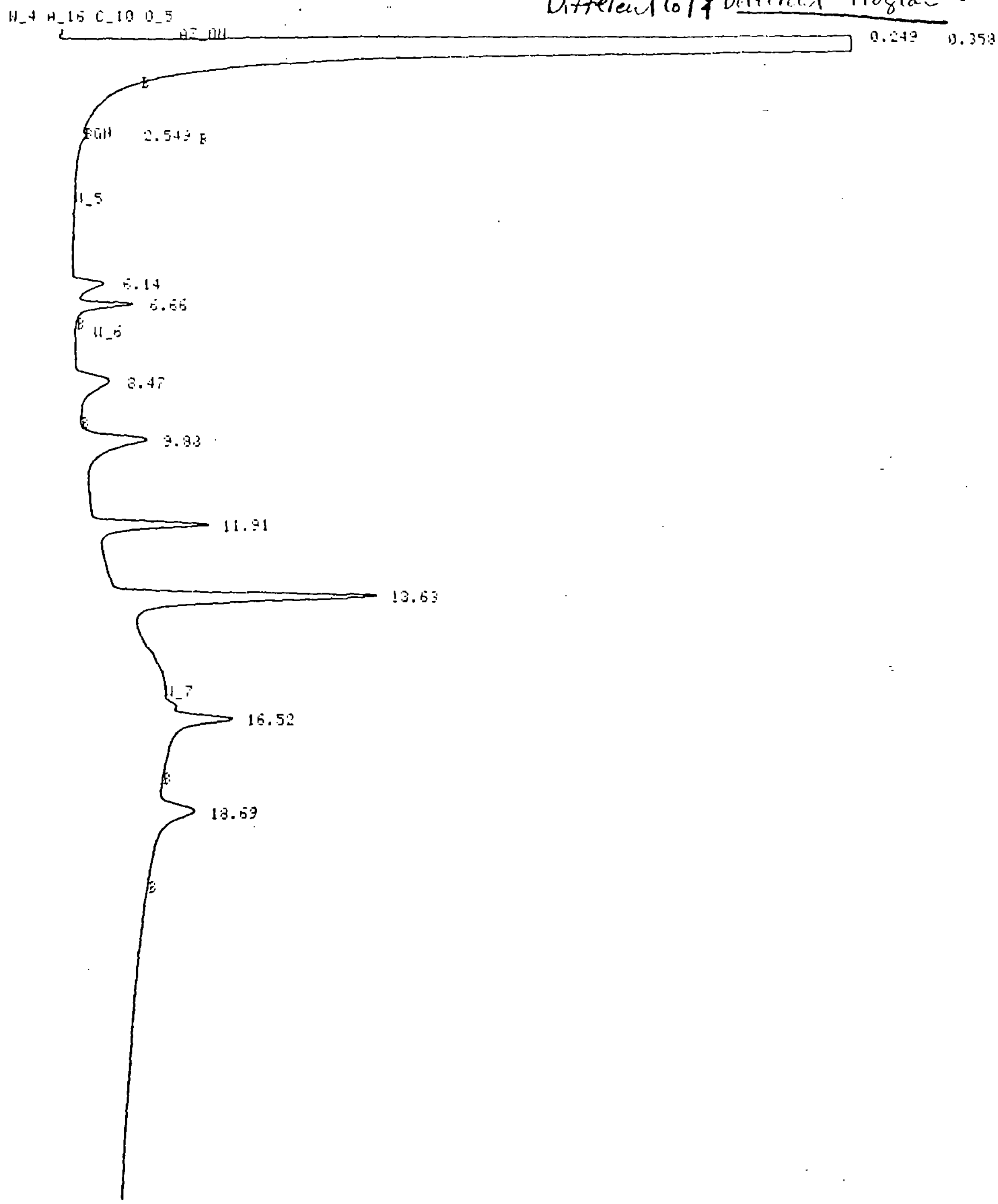
FILE 83   RUN 71   STARTED 02:29.9 80/01/05
% METHOD 1 HIGH BOILERS   LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
15.41	100639	7.9732	V	100.0000	100.0000

1 PEAK > AREA REJECT 100639 TOTAL AREA
1 PEAK > HEIGHT REJECT 7.9732 TOTAL HEIGHT

4λ Spiked sample (0.2λ std)

Different Col / Different Program (Temp ramp)



96

FILE 93 RUN 80 STARTED 13:14.1 80/01/05

% METHOD 1 HIGH BOILERS LAST EDITED 14:36.1 80/01/02

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
2.549	3612	0.5771		0.1741	0.4596
5.14	77535	5.4558	V	3.7372	4.3452
6.66	96035	10.3447		4.6289	8.2389
8.47	161855	6.1335		7.8019	4.8849
9.88	273167	12.1535	V	13.1667	9.6795
11.91	250431	21.7753	V	12.0709	17.3427
→ 13.63	716529	49.0451	V	34.5374	39.0614
16.52	303204	13.1392		14.6145	10.4645
18.69	192287	6.9347		9.2683	5.5231

9 PEAKS > AREA REJECT 2074675 TOTAL AREA

9 PEAKS > HEIGHT REJECT 125.5590 TOTAL HEIGHT

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/30/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: G. Brock
Date of Analysis: 9/15/87
Method of Analysis: Common Solvents
Detection Limit: 1.0
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092427	Acetone	< 1.0	< 1.0	0

Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092427	Acetone	< 1.0	30	28	93

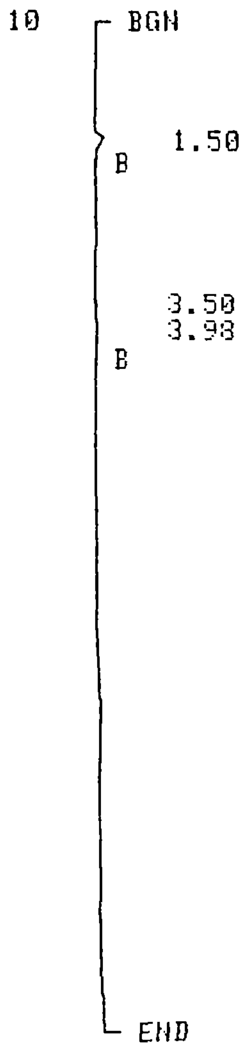
SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

2 22:06 87/09/15

5 MODIFIED

BLANK.



RUN 12 22:06 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
1.50	0.0461		39.3711
3.50	0.0468	V	39.9573
3.98	0.0242		20.6714

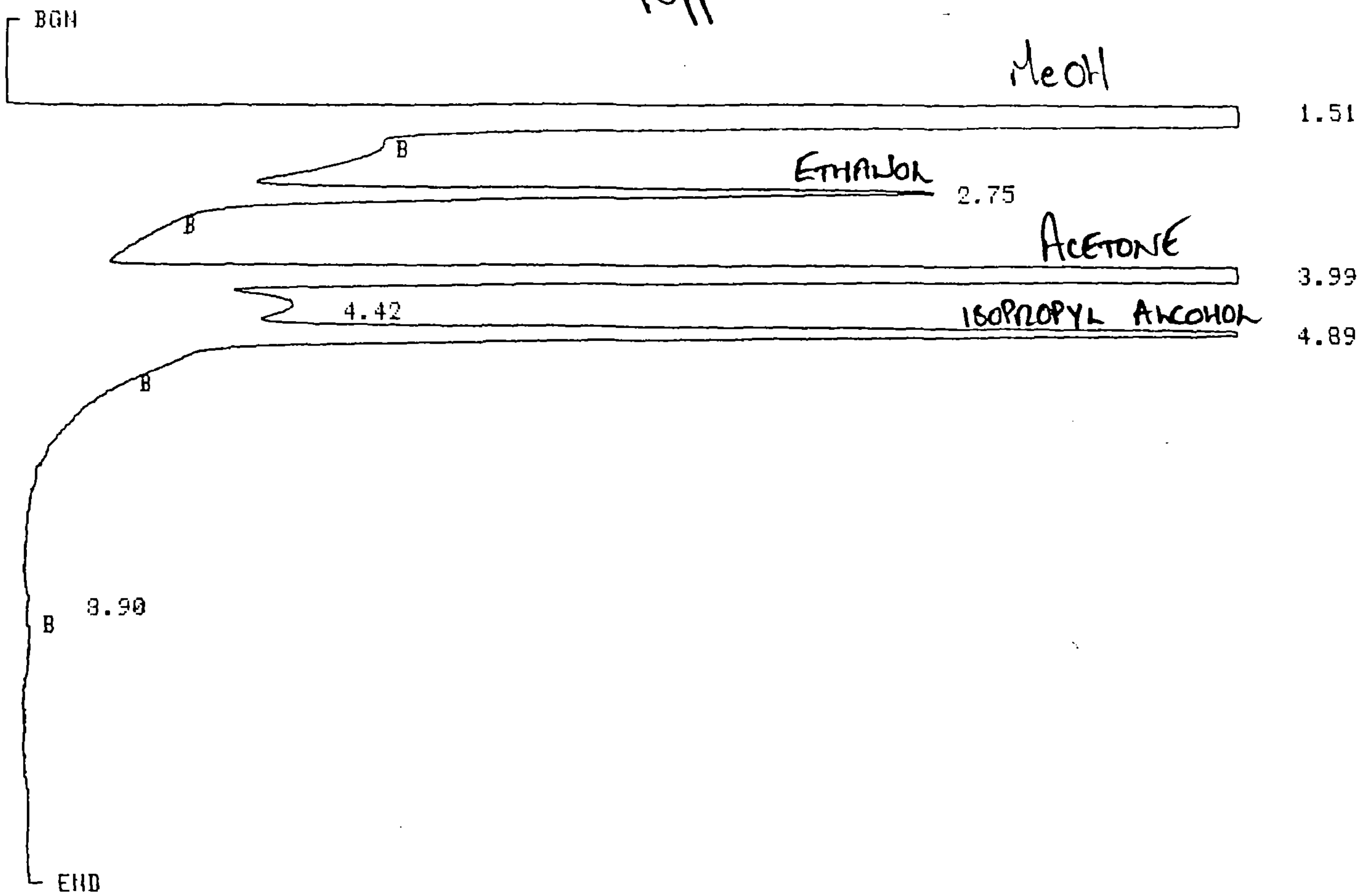
3 PEAKS > AREA/HT REJECT

9 21:07 87/09/15

D 5 MODIFIED

10ppm. STANDARD.

C 10



RUN 9 21:07 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
1.51	44.9355		59.7375
2.75	2.0165		2.6808
3.99	22.1813	T	29.4880
4.42	1.3034	T	1.7328
4.89	4.7669		6.3372
8.90	0.0177		0.0235

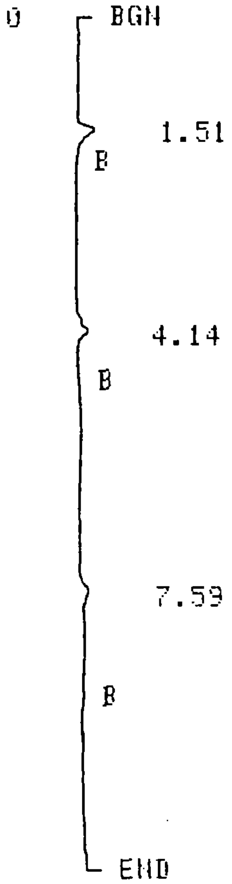
6 PEAKS > AREA/HT REJECT

3 PEAKS > AREA/HT REJECT

22:24 87/09/15

lcc # 7082427

MODIFIED



UN 13 22:24 87/09/15

IETHOD 5 MODIFIED CALCULATION: %

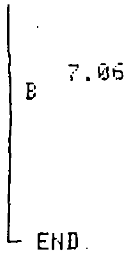
RT	AREA	BC	AREA %
1.51	0.1016		37.7337
4.14	0.0604		22.4421
7.59	0.1072		39.8241

3 PEAKS > AREA/HT REJECT

UN DEVIATIONS

IME	ZONE	CHANGE	TYPE
[illegible]	RAMP RATE 1	4.0 TO 8.0 DEG C/MIN	KB

W 7



RUN 6 22:25 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.60	0.0144	T	23.9502
0.83	0.0260		43.2028
7.06	0.0198		32.8469

3 PEAKS > AREA/HT REJECT

1cc # 7082428 (10ads).

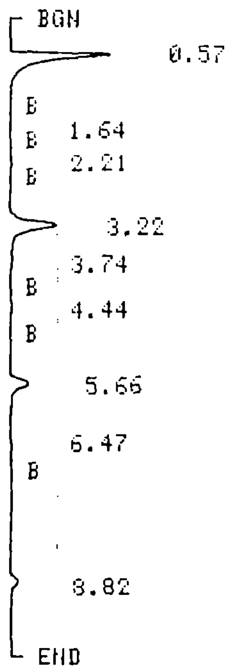
RUN 7 22:37 87/09/15

METHOD 5 MODIFIED

A 16 C 10

W 6

W 7



RUN 7 22:37 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.57	1.8853		47.8978
1.64	0.0115		0.2927
2.21	0.0445		1.1311
3.22	1.1792	T	29.9586
3.74	0.0617		1.5677
4.44	0.0438		1.1136
5.66	0.4744	T	12.0522
6.47	0.0294		0.7476
8.82	0.2061	V	5.2381

9 PEAKS > AREA/HT REJECT

H 7

END

RUN 2 21:37 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.56	0.0212	T	20.8603
0.86	0.0241		23.7815
1.33	0.0058		5.7847
2.03	0.0504	V	49.5733

4 PEAKS > AREA/HT REJECT

RUN 3 21:50 87/09/15 lcc # 7082429. (10mls).

METHOD 5 MODIFIED

H 16 C 10 BGN

B 0.61 0.89

H 6 B 3.36

B 6.51

H 7

END

RUN 3 21:50 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.61	0.0105	T	12.8154
0.89	0.0285		34.5590
3.36	0.0206		25.0114
6.51	0.0228		27.6139

4 PEAKS > AREA/HT REJECT

B 6.51

END

RUN 3 21:50 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.61	0.0105	T	12.8154
0.89	0.0285		34.5590
3.36	0.0206		25.0114
6.51	0.0228		27.6139

4 PEAKS > AREA/HT REJECT

4 22:02 87/09/15 7082430 (10mls).

THOD 5 MODIFIED

16 C 10 BGN

0.56
0.83

B

4.47

B

5.69

6.52

8.85

END

RUN 4 22:02 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.56	0.0186	T	4.1097
0.83	0.0752		16.5633
4.47	0.0400		8.8096
5.69	0.2642	V	58.1507
6.52	0.0137	V	3.0232
8.85	0.0424	V	9.3433

6 PEAKS > AREA/HT REJECT

0.79 0.1926

4 PEAKS > AREA/HT REJECT

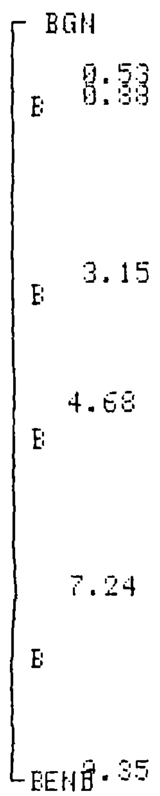
RUN DEVIATIONS

TIME	ZONE	CHANGE	TYPE
10.20	OVEN TEMP	-	

13 23:29 87/09/15 1cc # 7082431.

D 5 MODIFIED

C 10



RUN 13 23:29 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.53	0.0200	T	4.3512
0.88	0.0274		5.9684
3.15	0.0131		2.8439
4.68	0.0257		5.5821
7.24	0.2555		55.4683
9.35	0.1187		25.7857

6 PEAKS > AREA/HT REJECT

B 5.69

B 7.12
W 7

8.82

END

RUN 5 22:14 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.56	0.0148	V	10.6411
0.84	0.0127		9.1075
5.69	0.0254		18.2375
7.12	0.0309		22.1318
8.82	0.0557	V	39.8819

5 PEAKS > AREA/HT REJECT

RUN 6 22:25 87/09/15

METHOD 5 MODIFIED

lcc # 7082432.

H 16 C 10 BGN

B 0.60 0.83

W 6

B 7.06
W 7

END

RUN 6 22:25 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.60	0.0144	T	23.9502
0.83	0.0260		43.2028
7.06	0.0198		32.8469

3 PEAKS > AREA/HT REJECT

6.52

H 7

8.85

END

RUN 4 22:02 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.56	0.0186	T	4.1097
0.83	0.0752		16.5633
4.47	0.0400		8.8096
5.69	0.2642	V	58.1507
6.52	0.0137	V	3.0232
8.85	0.0424	V	9.3433

6 PEAKS > AREA/HT REJECT

lc # 7082433 (10mls).

RUN 5 22:14 87/09/15

METHOD 5 MODIFIED

H 16 C 10 BGN

B 0.56 0.84

H 6

B 5.69

7.12

B

H 7

8.82

END

RUN 5 22:14 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.56	0.0148	V	10.6411
0.84	0.0127		9.1075
5.69	0.0254		18.2375
7.12	0.0309		22.1318
8.82	0.0557	V	39.8819

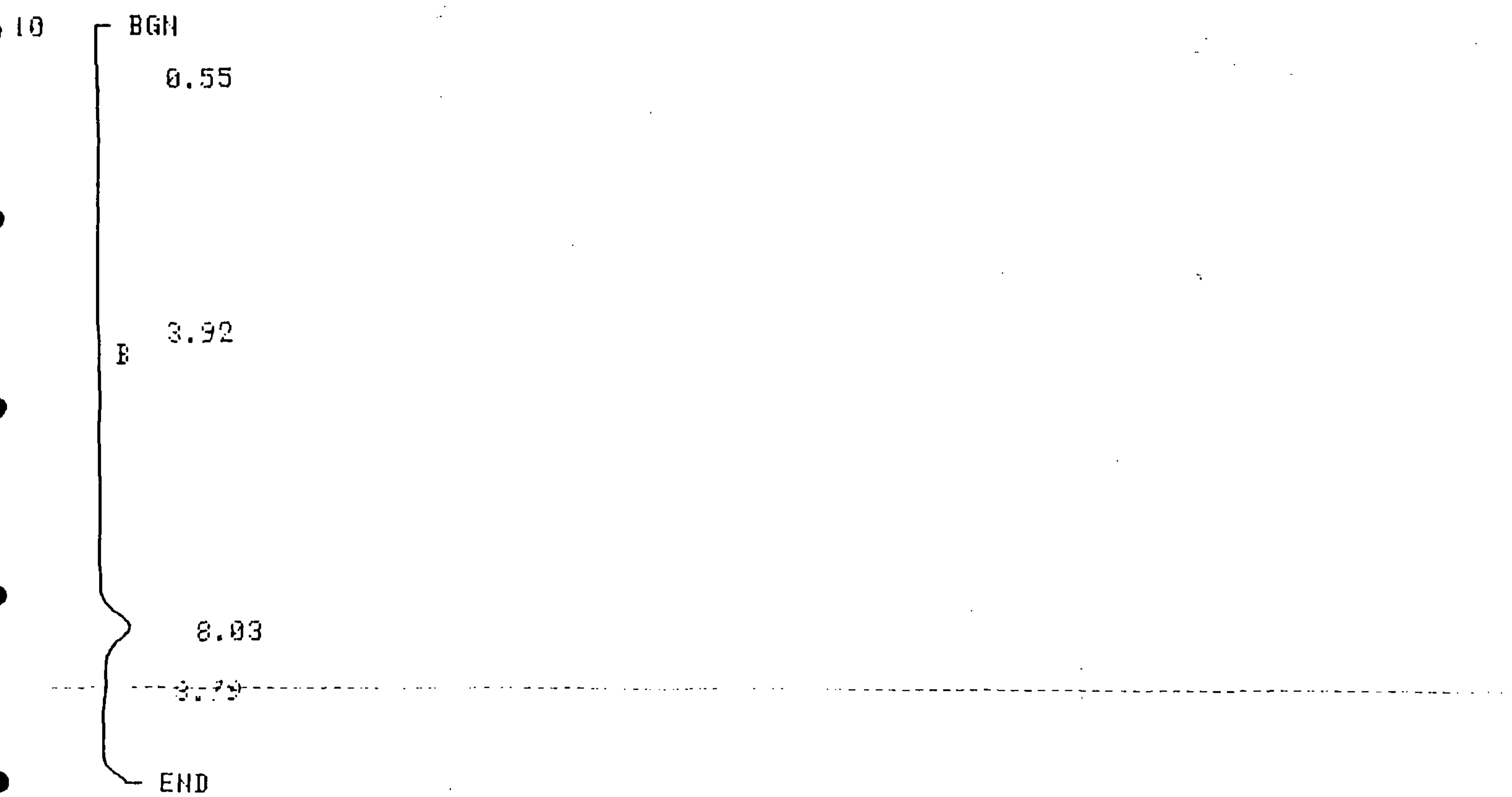
5 PEAKS > AREA/HT REJECT

RUN DEVIATIONS

TIME	ZONE	CHANGE		TYPE
6.42	OVEN TEMP 2	150 TO 122	DEG C	KB

23:16 87/09/15 lcc # 7082434 (10 mls).

5 MODIFIED



RUN 12 23:16 87/09/15

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.55	0.0109	V	0.5132
3.92	0.0040		0.1899
8.03	1.9185	T	90.2361
8.79	0.1926	V	9.0606

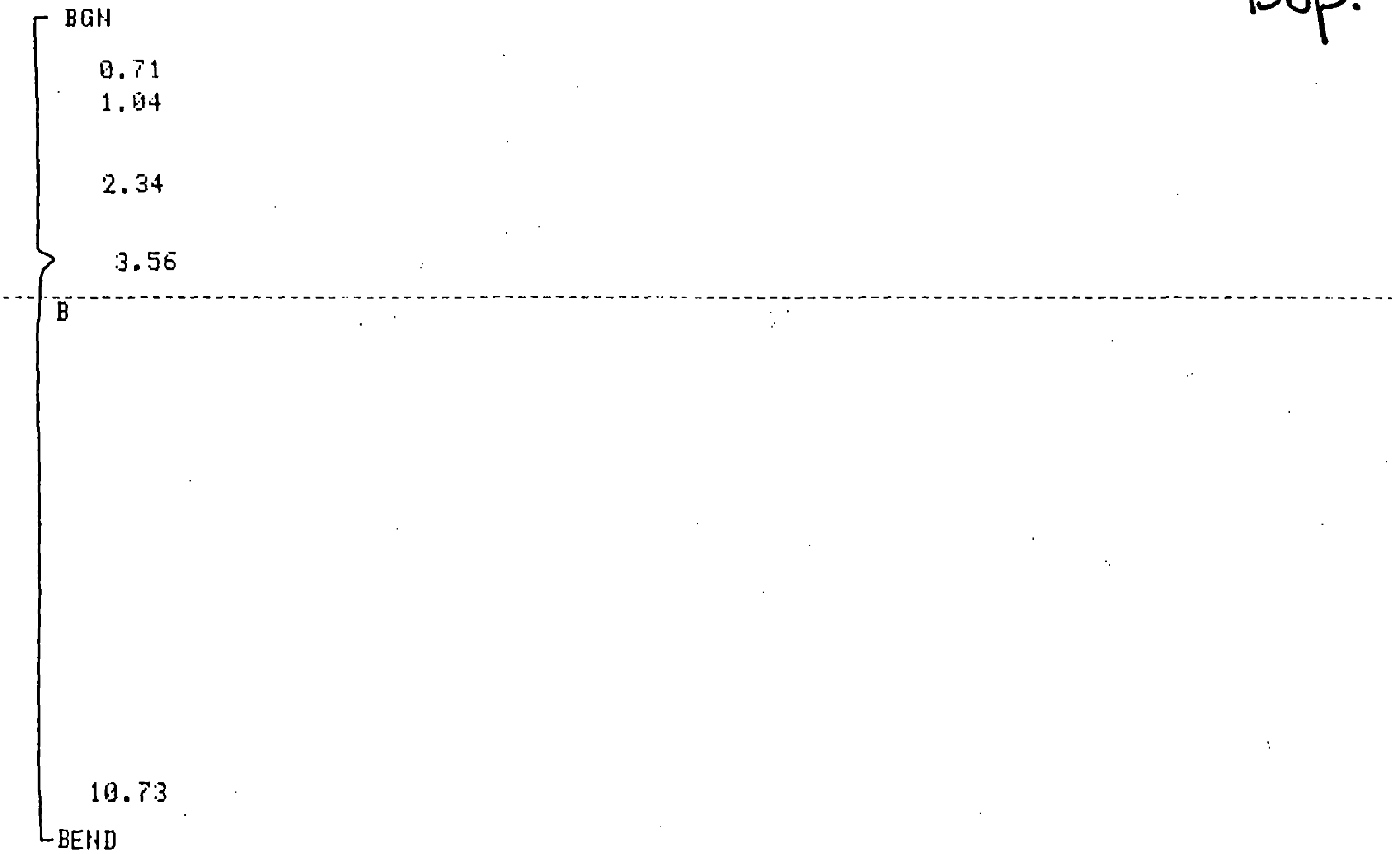
4 PEAKS > AREA/HT REJECT

RUN DEVIATIONS

22:54 87/09/15

MODIFIED

Icc # 708242-
Dup.



N 5 22:54 87/09/15

THOD 5 MODIFIED CALCULATION: %

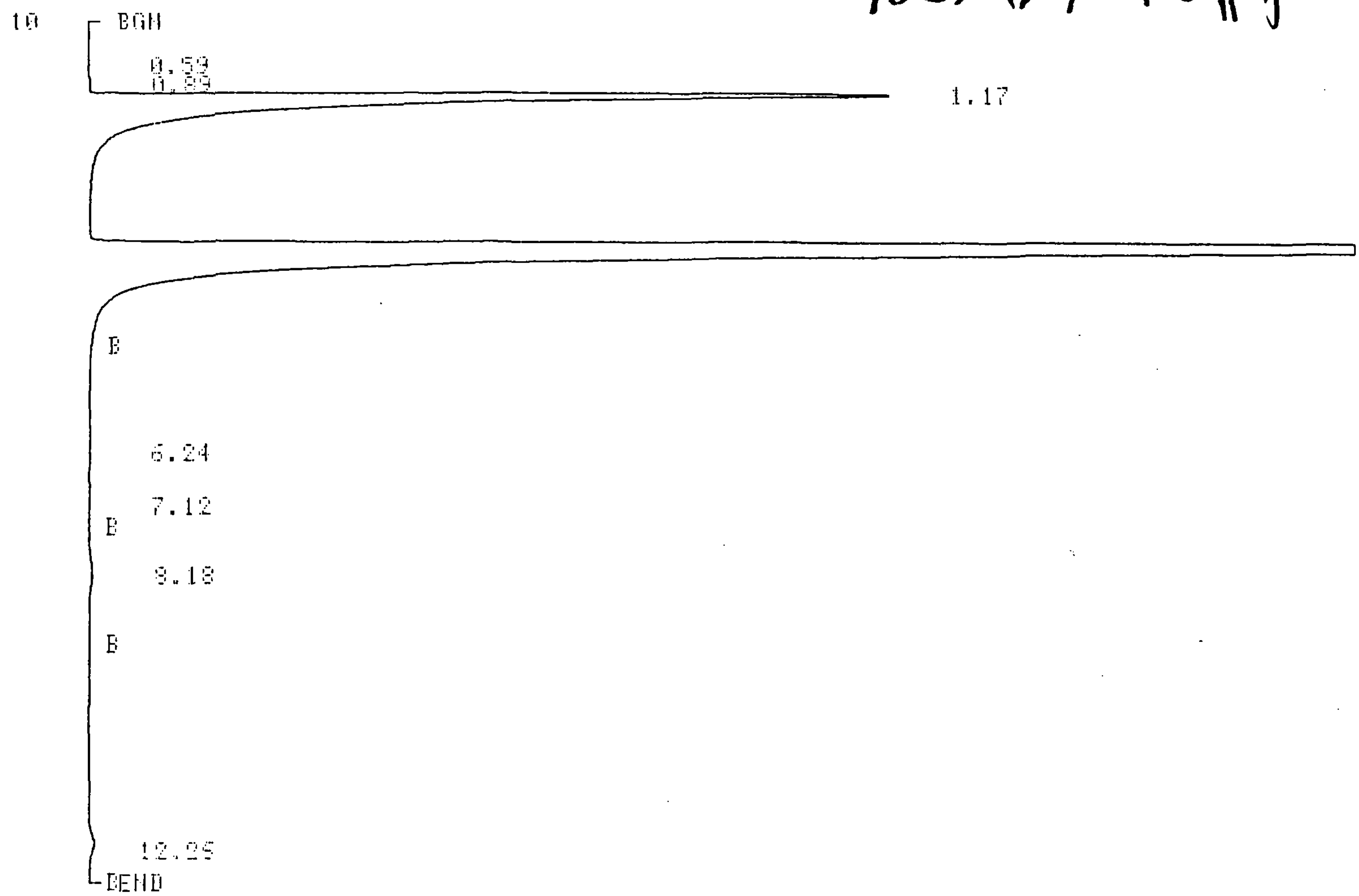
T	AREA	BC	AREA %
3.71	0.0192	T	2.9537
1.04	0.0252	T	3.8704
2.34	0.1019	V	15.6071
3.56	0.4596		70.3486
3.73	0.0471		7.2200

5 PEAKS > AREA/HT REJECT

0:05 87/09/16

5 MODIFIED

1cc # 70824127 +30ppm spike.



RUN 9 0:05 87/09/16

METHOD 5 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.59	0.0231	T	0.0273
0.89	0.0738	T	0.0873
1.17	20.9826	V	24.8204
3.46	62.7504		74.2276
6.24	0.1759	V	0.2081
7.12	0.0061		0.0072
8.18	0.2586		0.3059
12.26	0.2669		0.3157

8 PEAKS > AREA/HT REJECT

RUN DEVIATIONS

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 08/28/87
Date Received: 08/31/87
Date Reported: 09/30/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: W. Amundsen
Date of Analysis: 9/9/87
Method of Analysis: EPA 624
Detection Limit: 0.5
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7091017	Cl_4	7.4	7.8	2.6

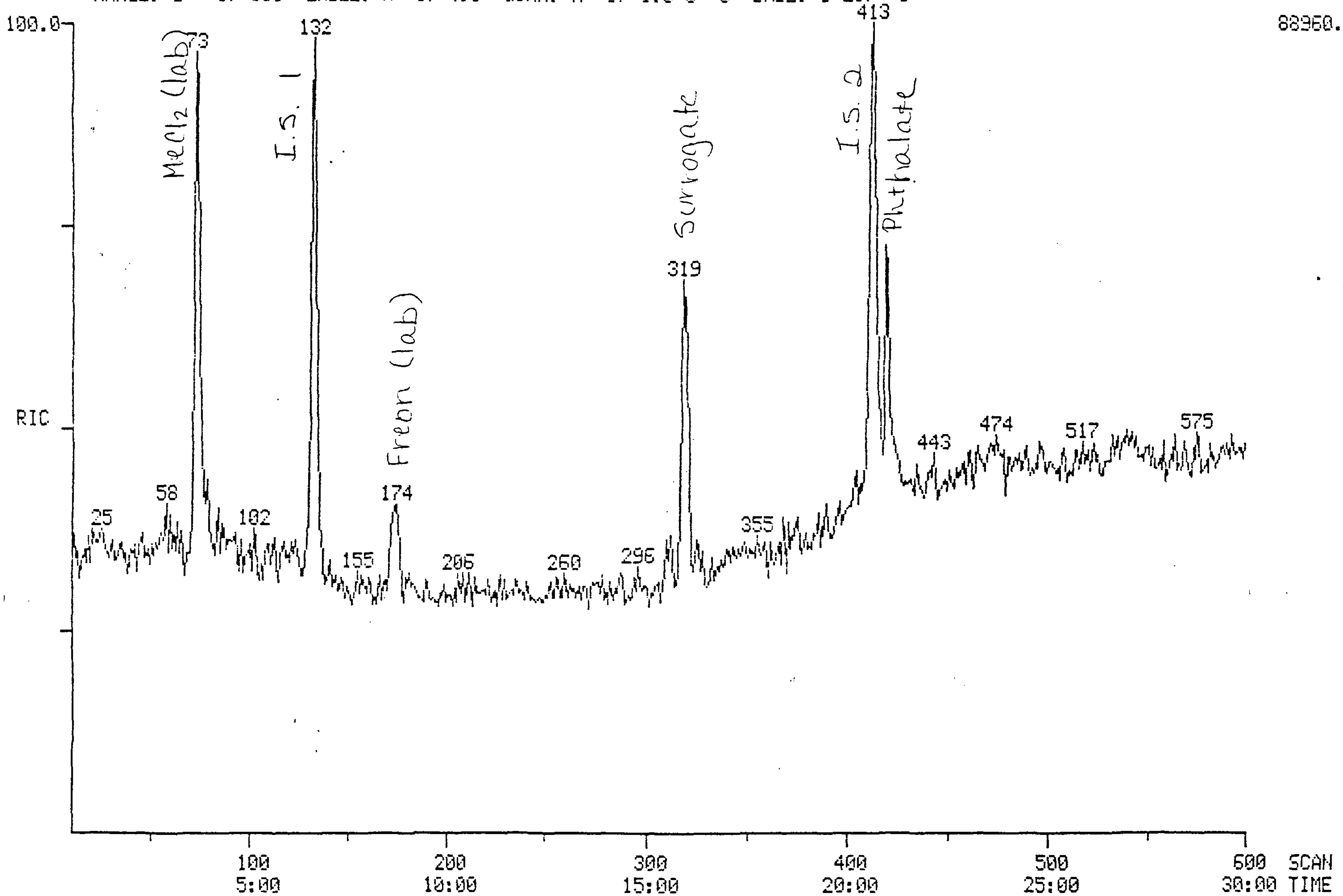
Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7082435	I.S. 1	< 0.5	20	22	110

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

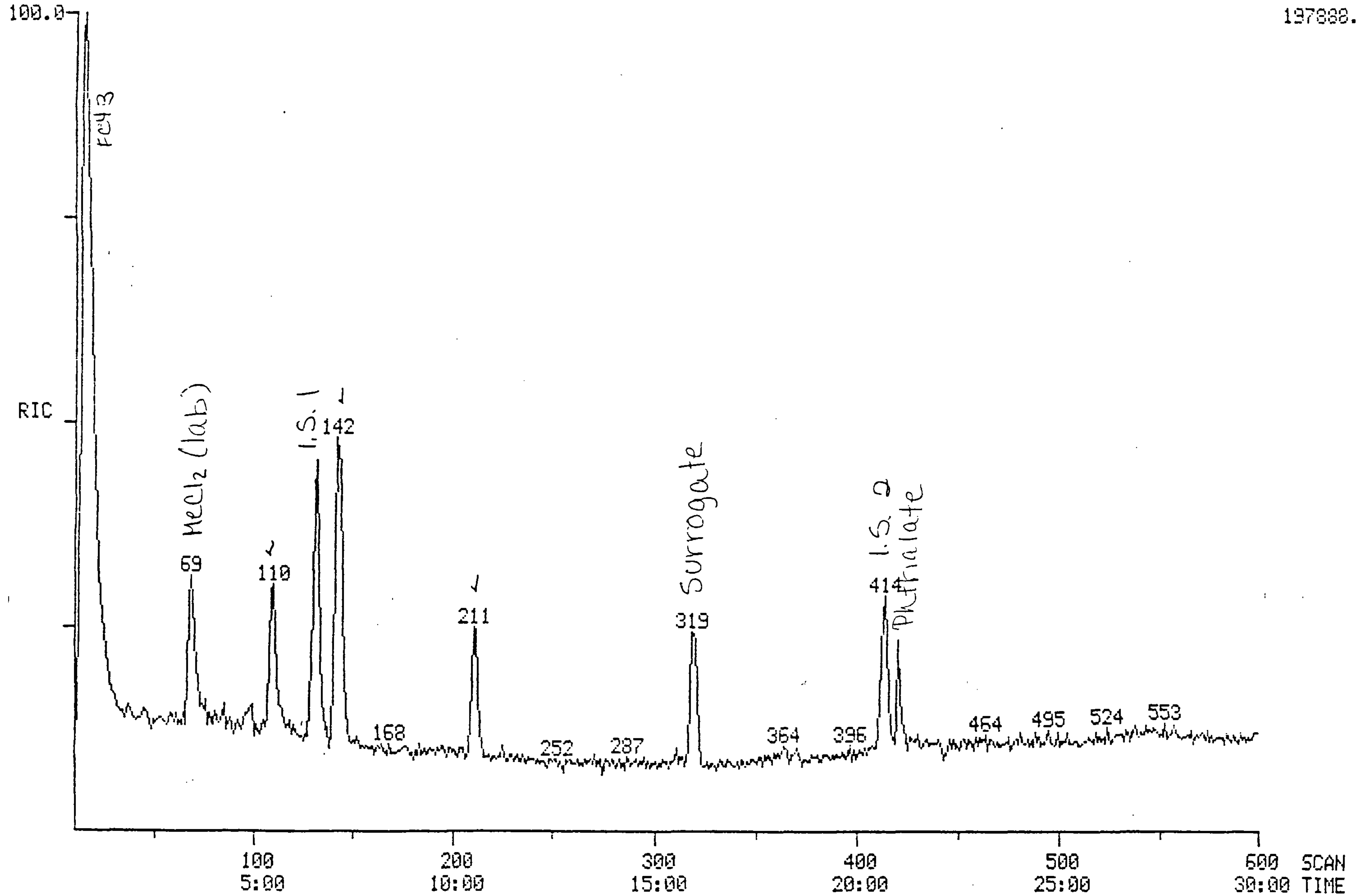
RIC
09/08/87 10:43:00
SAMPLE: VOA MEOH BLANK (200UL/5ML)
CONDS.: VOA METHOD
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: VOABLK0908 #420 SCANS 10 TO 600
CALI: VOABLK0908 #2



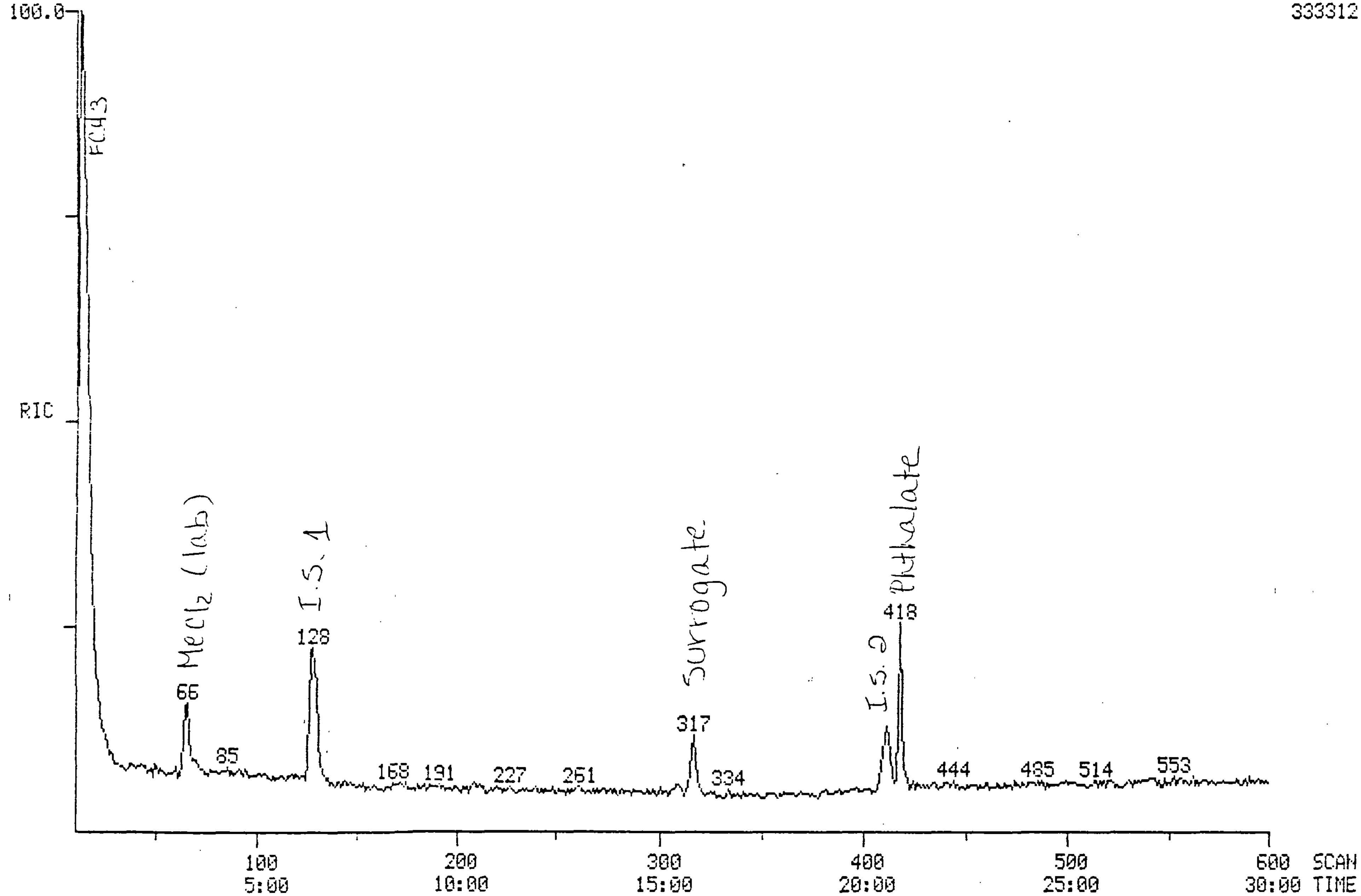
RIC
09/08/87 16:09:00
SAMPLE: I-2 (5ML)
CONDS.: VOA METHOD
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: VOA7082435 #211 SCANS 10 TO 600
CALI: VOA7082435 #2



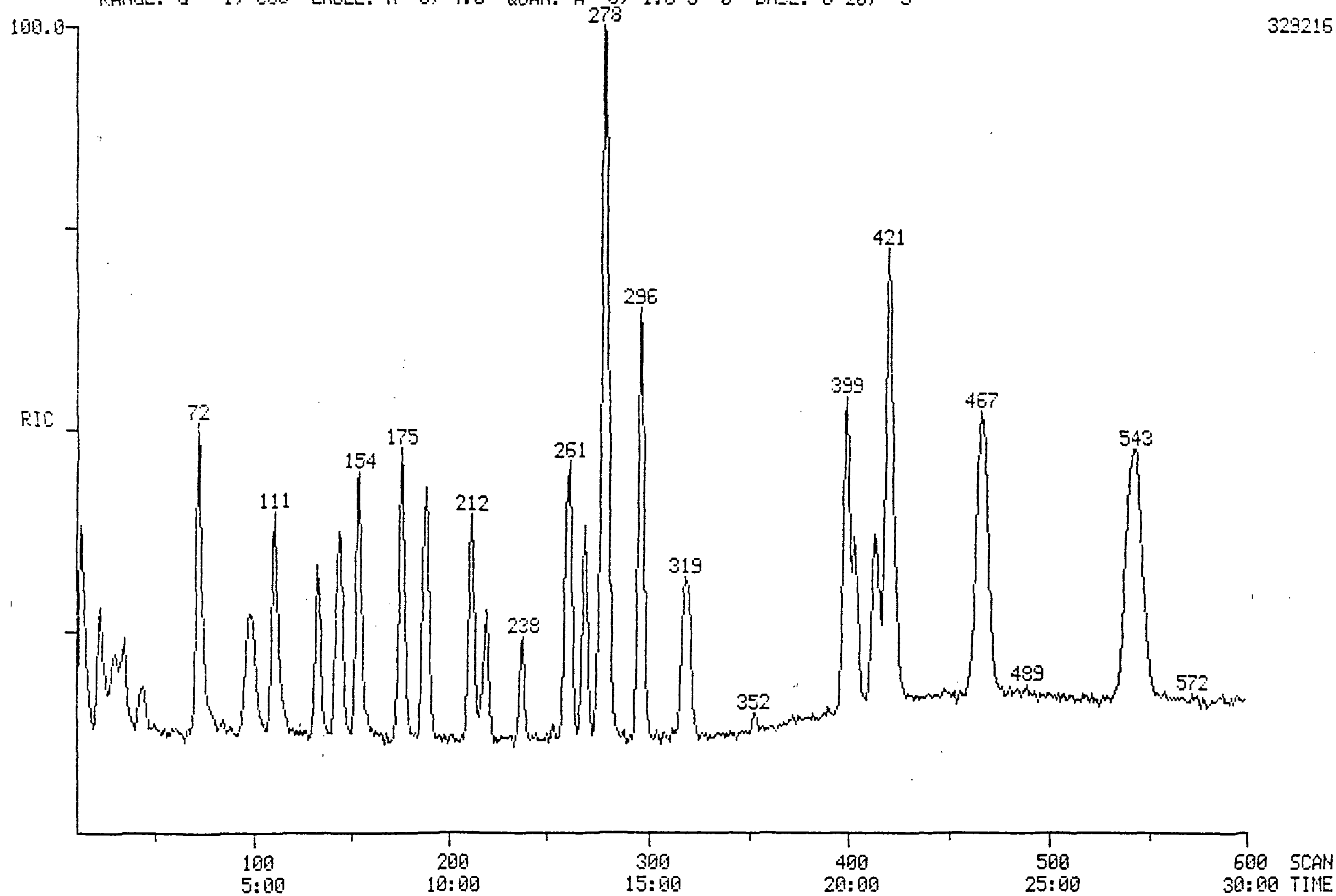
RIC
09/08/87 18:30:00
SAMPLE: I-2 (5ML)
CONDS.: VOA METHOD
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: VOA7082436 #1 SCANS 10 TO 600
CALI: VOA7082436 #2



RIC
09/08/87 9:39:00
SAMPLE: A,B&C VOA STD (20UG/L)
CONDS.: VOA METHOD
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: VOASTD0908 #1 SCANS 10 TO 600
CALI: VOASTD0908 #2



SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: G. Brock
Date of Analysis: 10/12/87
Method of Analysis: EPA 3510/8015
Detection Limit: 1.0
Units: ppm

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092021	P. Thinner	< 1.0	< 1.0	0

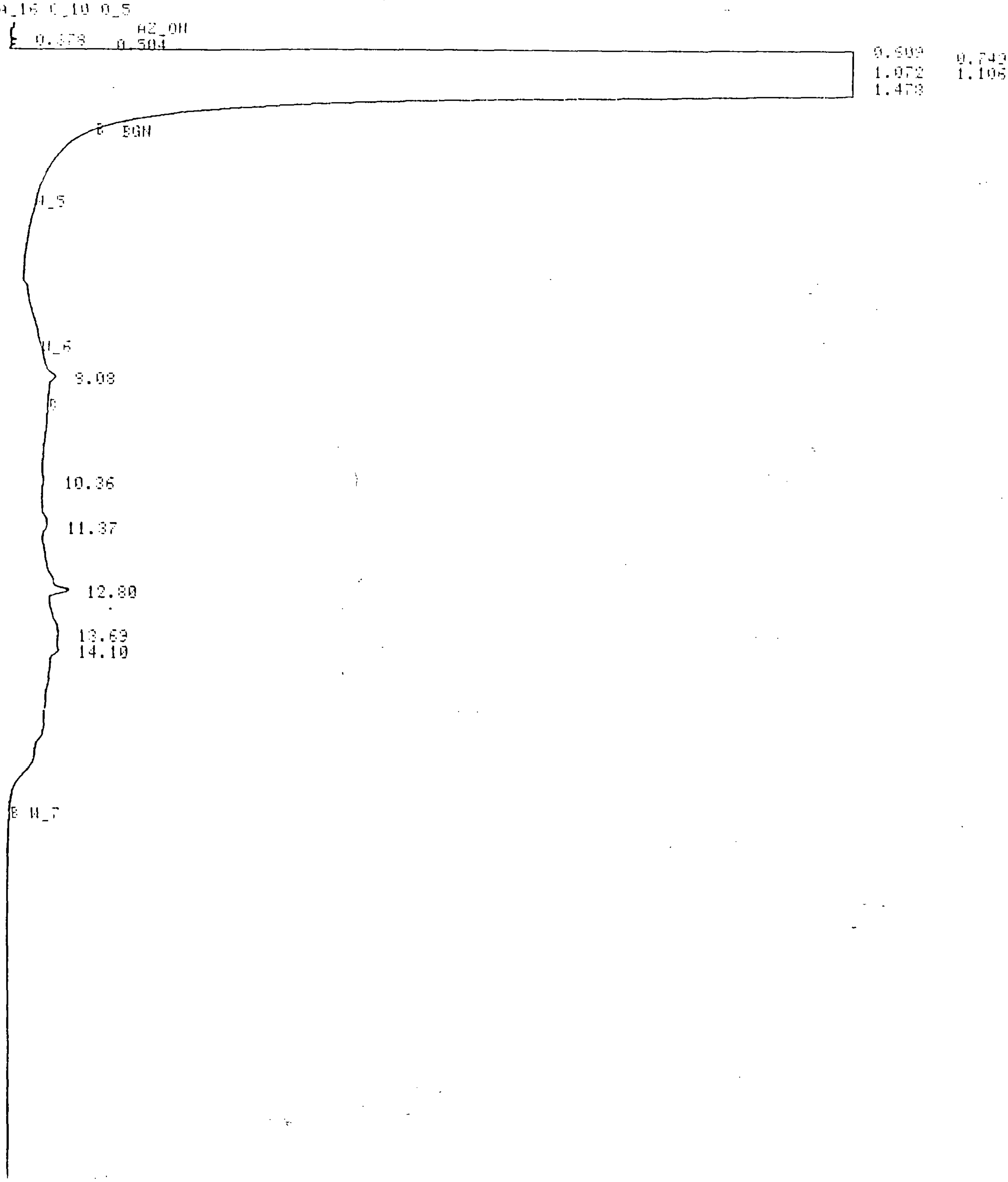
Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092021	P. Thinner	< 1.0	200	210	105

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

FILE 1 RUN 6 STARTED 08:17.2 87 10 09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

BLANK

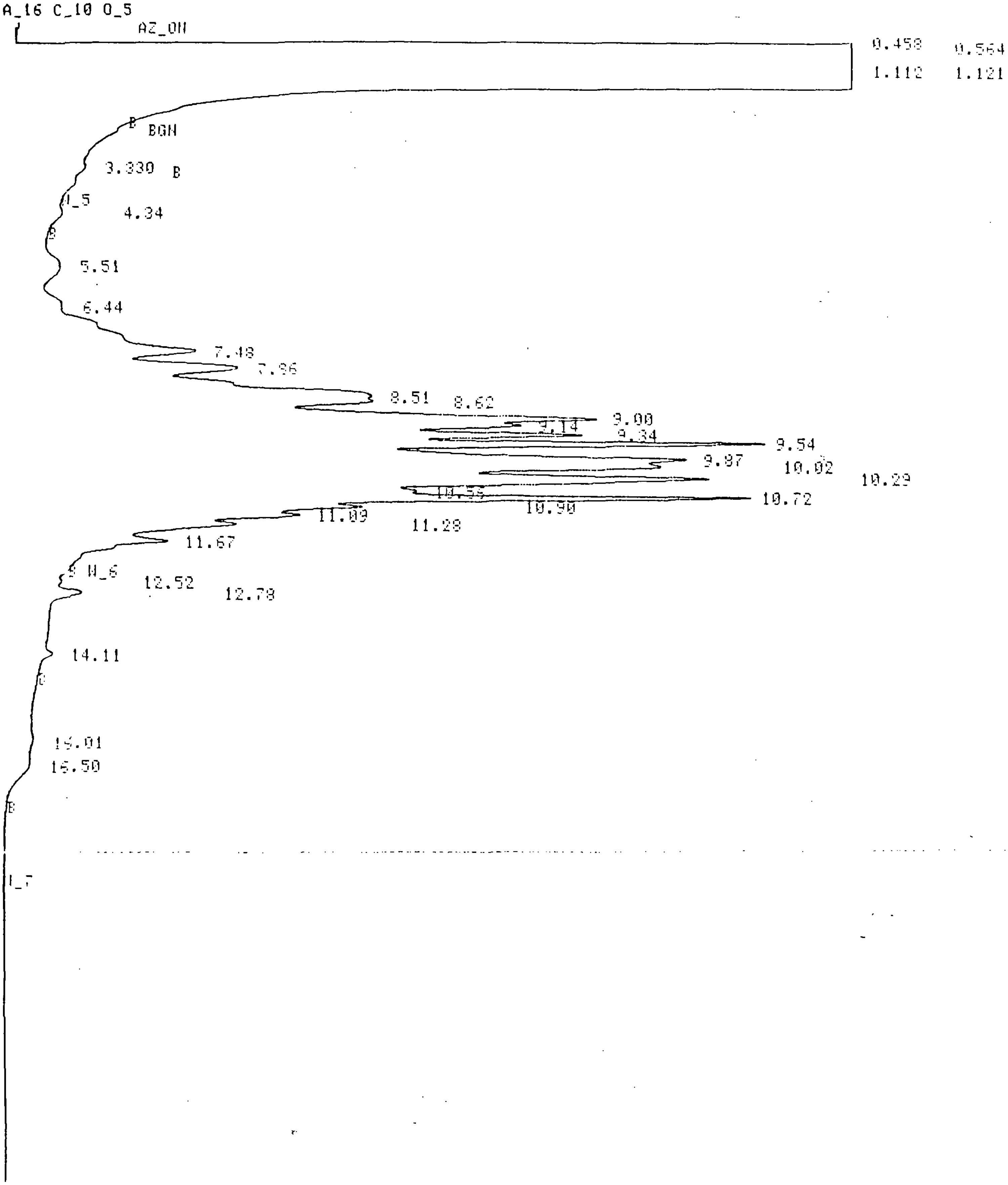


ILE 1 RUN 6 STARTED 08:17.2 87 10 09

Paint thinner STD.

FILE 157 RUN 7 STARTED 08:52.7 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

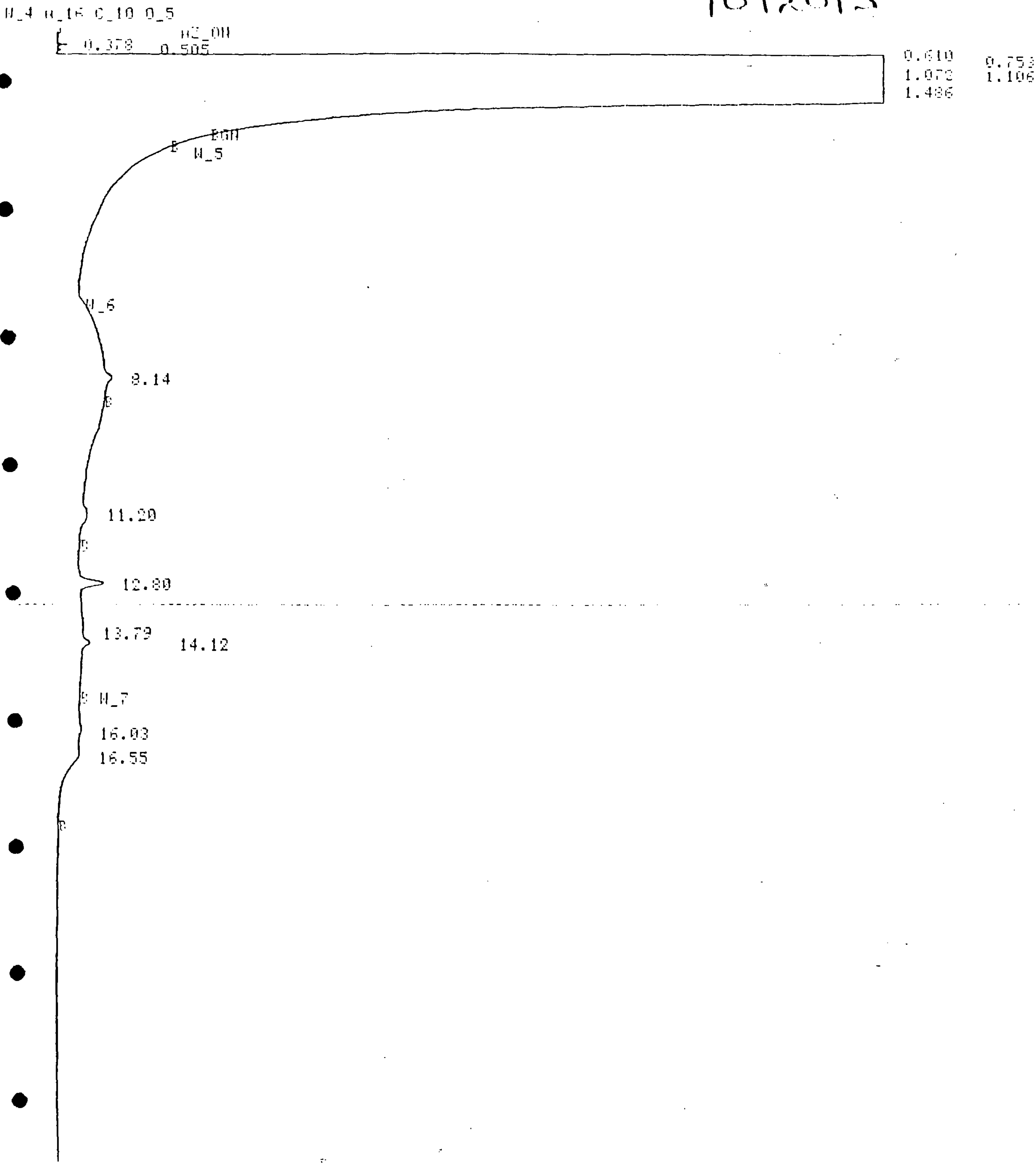
_4 A_16 C_10 O_5



ILE 157 RUN 7 STARTED 08:52.7 87/10/09

FILE 158 RUN 8 STARTED 09:21.5 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

7072015



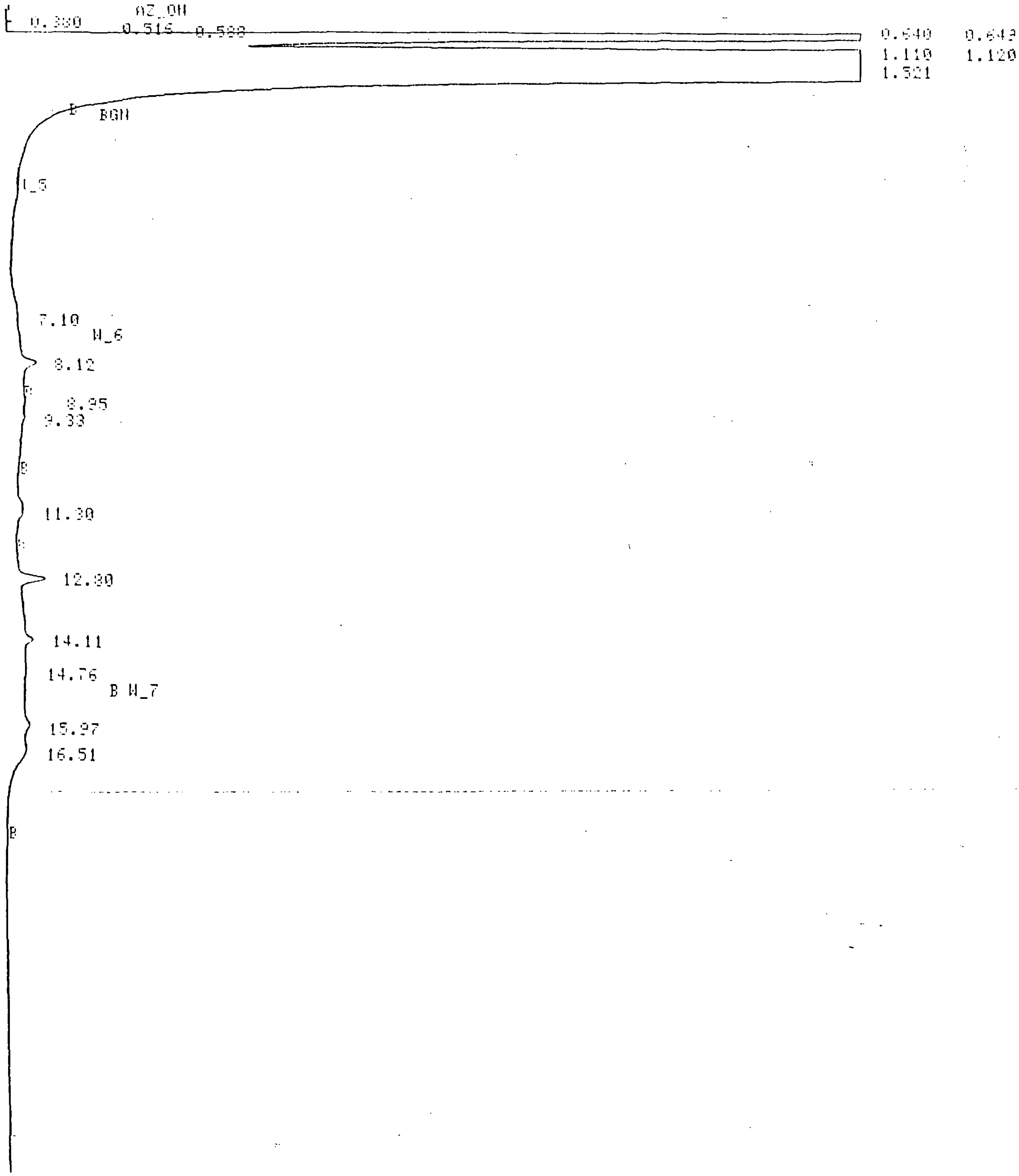
FILE 158 RUN 8 STARTED 09:21.5 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT

7092016

FILE 160 RUN 10 STARTED 10:20.9 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

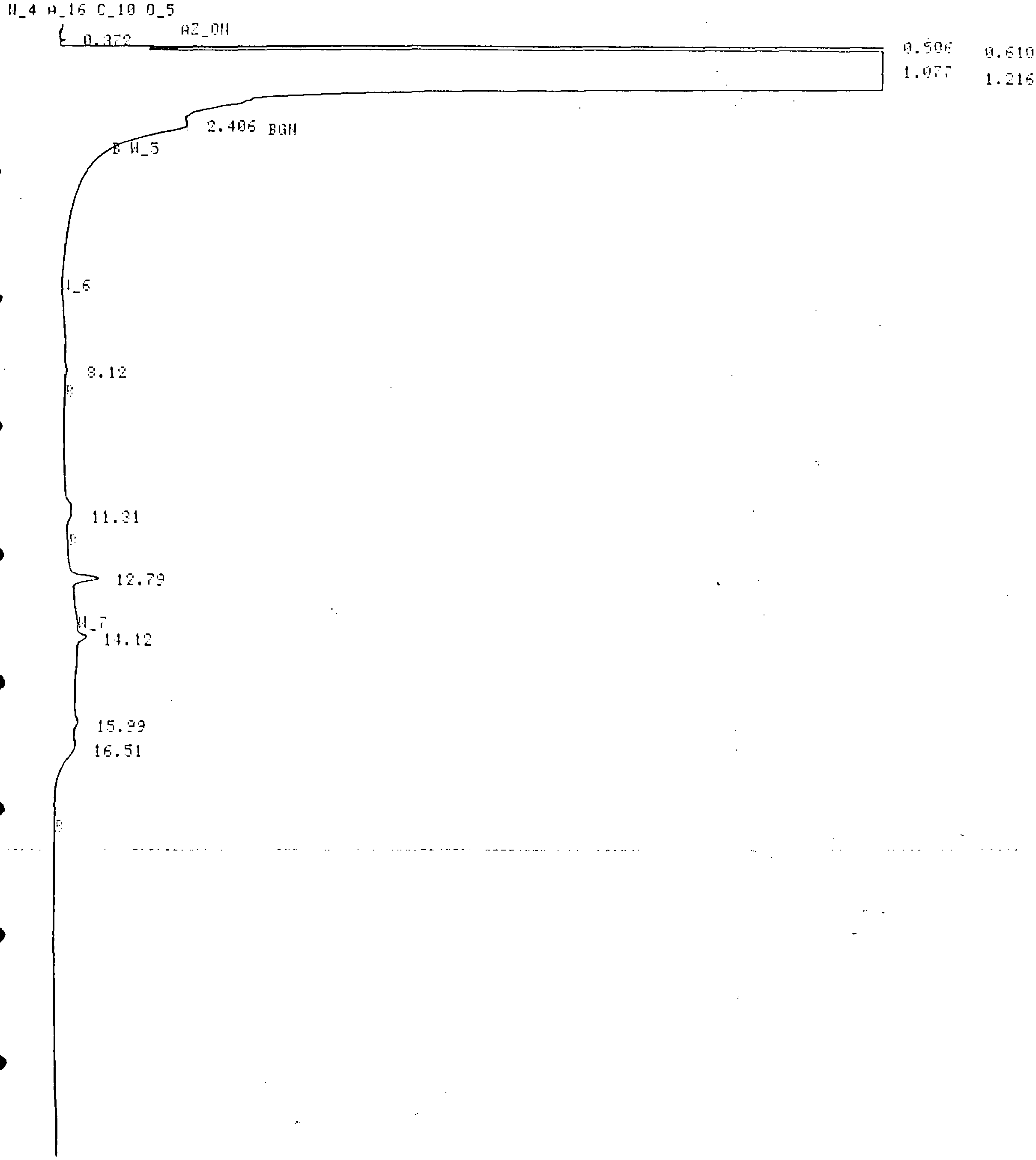
I_4 H_16 C_10 O_5



FILE 160 RUN 10 STARTED 10:20.9 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

1792017

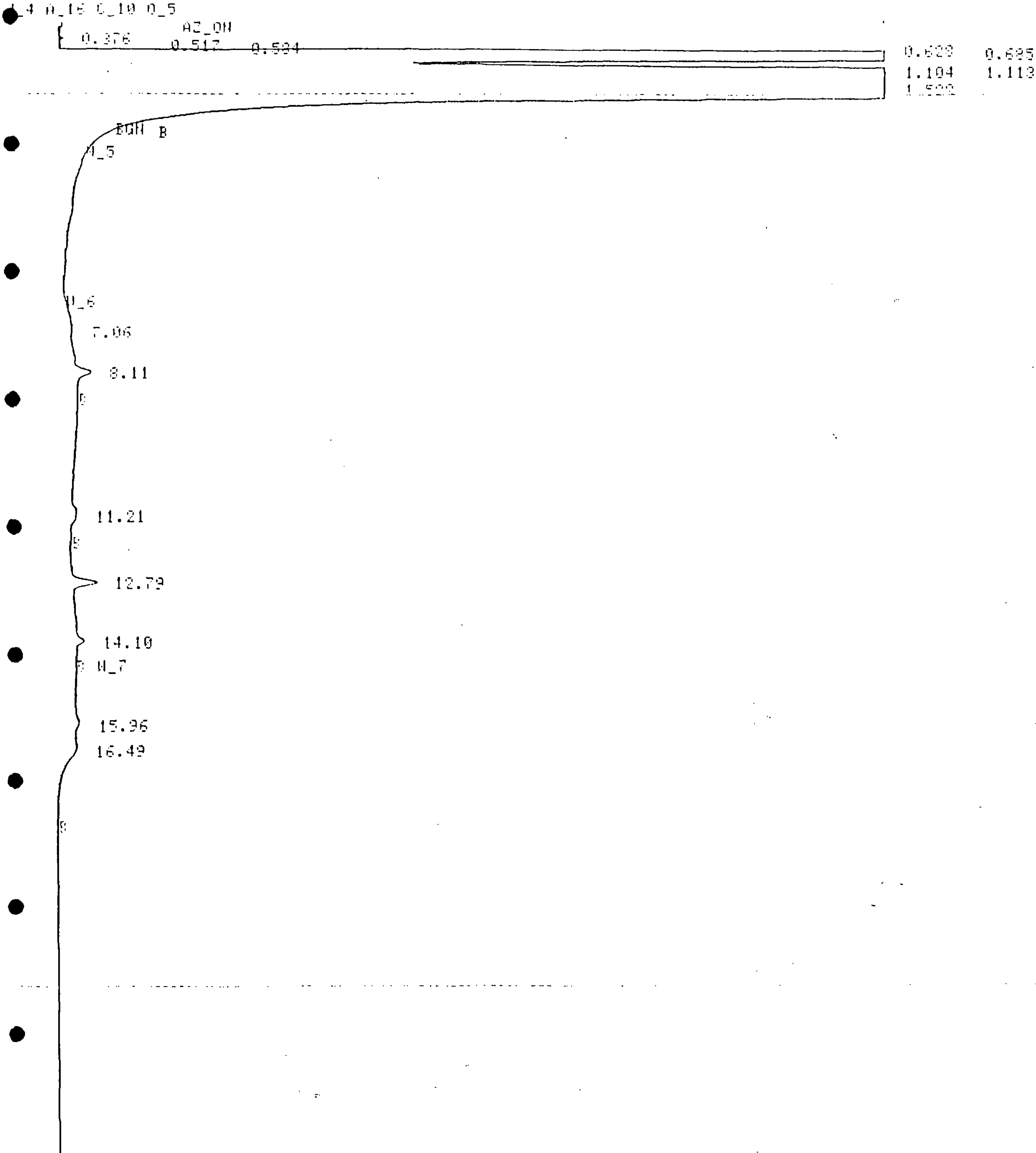
FILE 161 RUN 11 STARTED 10:51.4 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



FILE 161 RUN 11 STARTED 10:51.4 87 10 09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

7092018

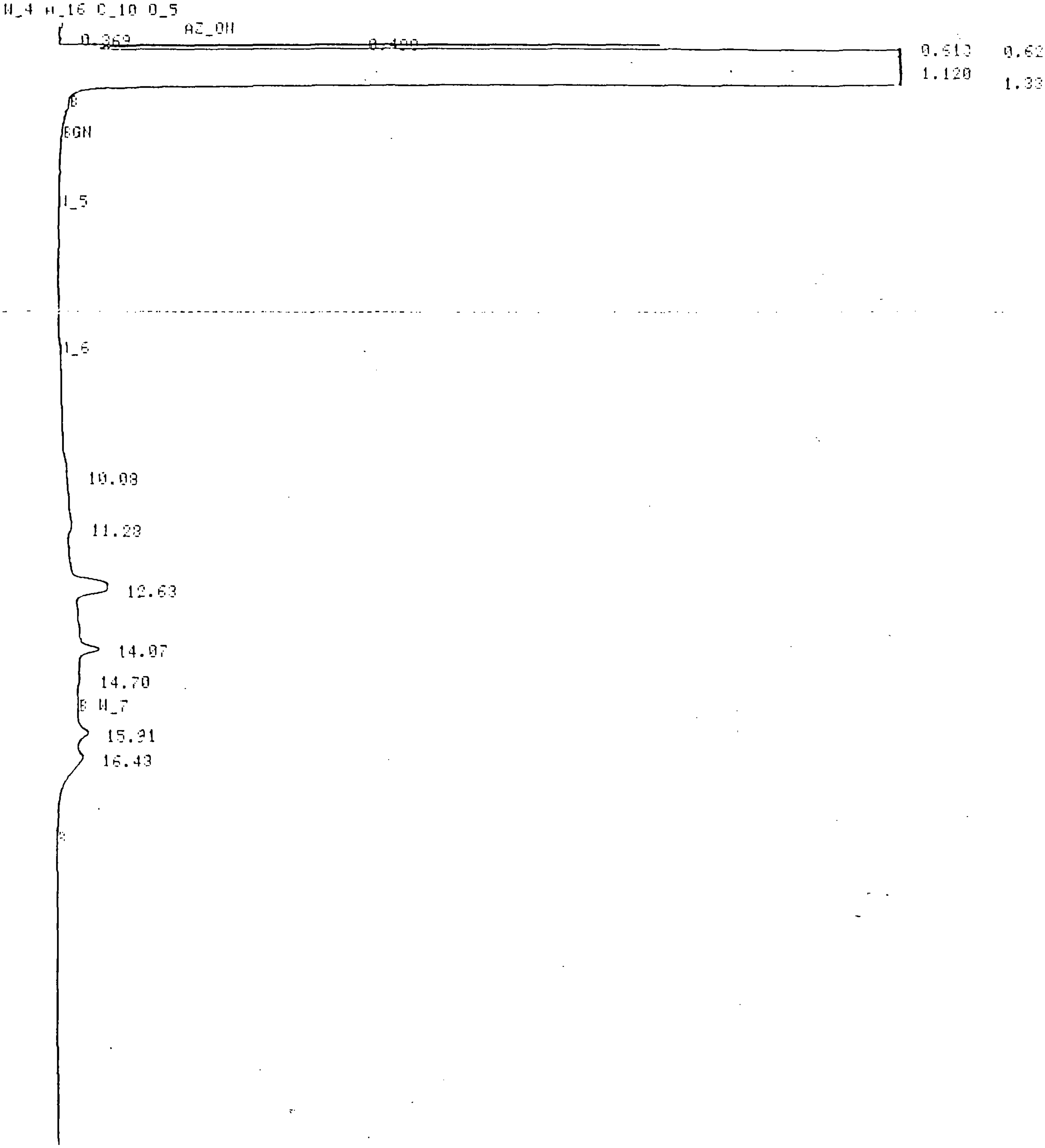
FILE 162 RUN 12 STARTED 11:18.3 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



FILE 162 RUN 12 STARTED 11:18.3 87/10/09

9092019

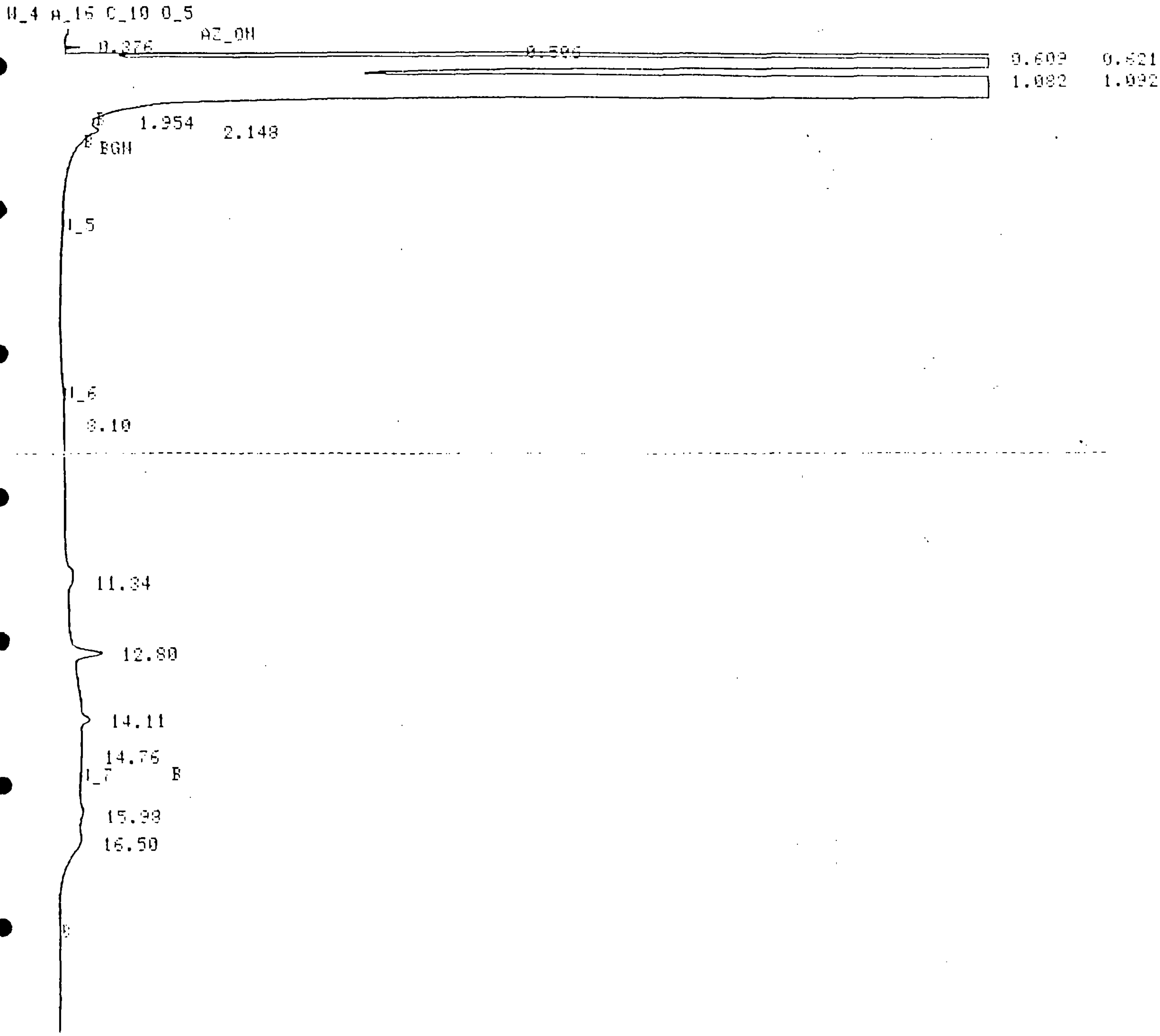
FILE 164 RUN 14 STARTED 12:53.7 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



FILE 164 RUN 14 STARTED 12:53.7 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

1/1/2020

FILE 165   RUN 15   STARTED 13:46.3 87/10/09
% METHOD 1 DIESELS HIGH BS   LAST EDITED 06:11.7 80/01/13



FILE 165   RUN 15   STARTED 13:46.3 87/10/09
% METHOD 1 DIESELS HIGH BS   LAST EDITED 06:11.7 80/01/13

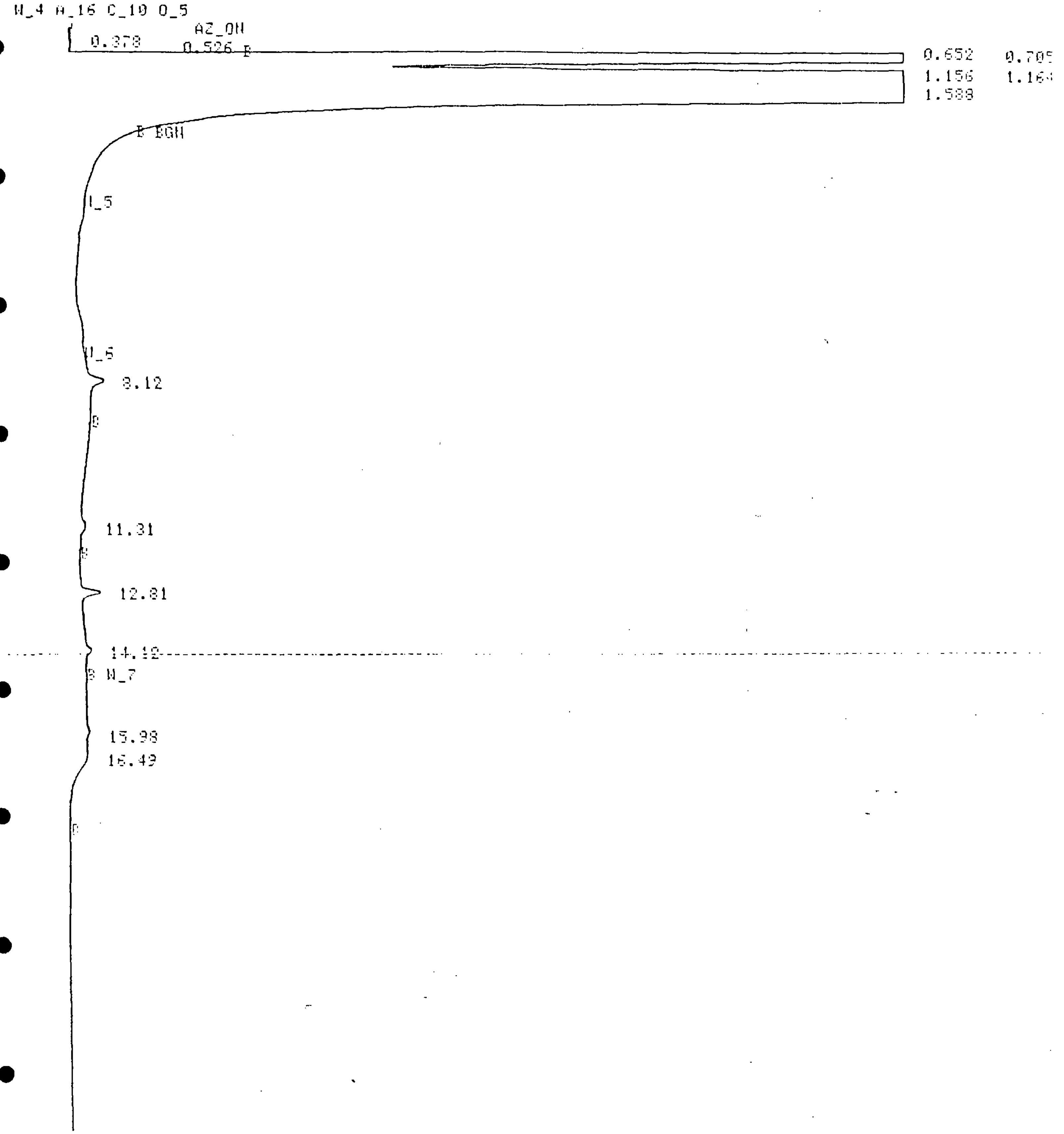
RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
8.10	2807	0.1423	U	3.0973	1.6924
11.34	20426	0.9075	U	22.5385	10.7910
12.80	41139	4.5450	U	45.3937	54.0442
14.11	15048	1.4894	U	16.6043	17.7105
14.76	1507	0.1264		1.6629	1.5034
15.98	9700	0.6229	U	10.7032	7.4065
16.50		0.5762			6.8521

6 PEAKS > AREA REJECT   90627 TOTAL AREA
7 PEAKS > HEIGHT REJECT   8.4098 TOTAL HEIGHT

TIME EVENT VALUE

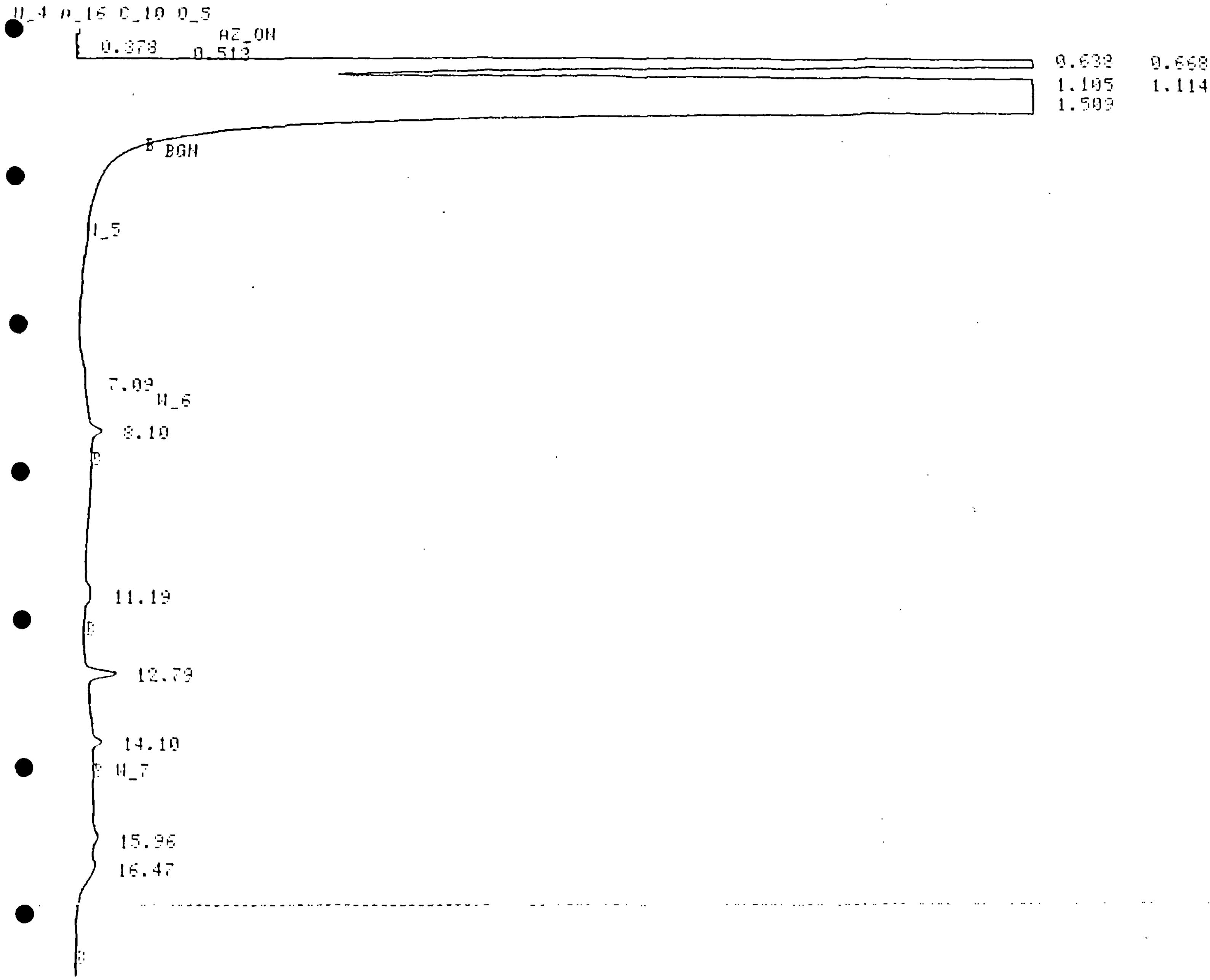
7092021

FILE 166 RUN 16 STARTED 14:08.8 87/10/09
: METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



7092022

FILE 167 RUN 17 STARTED 14:37.9 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



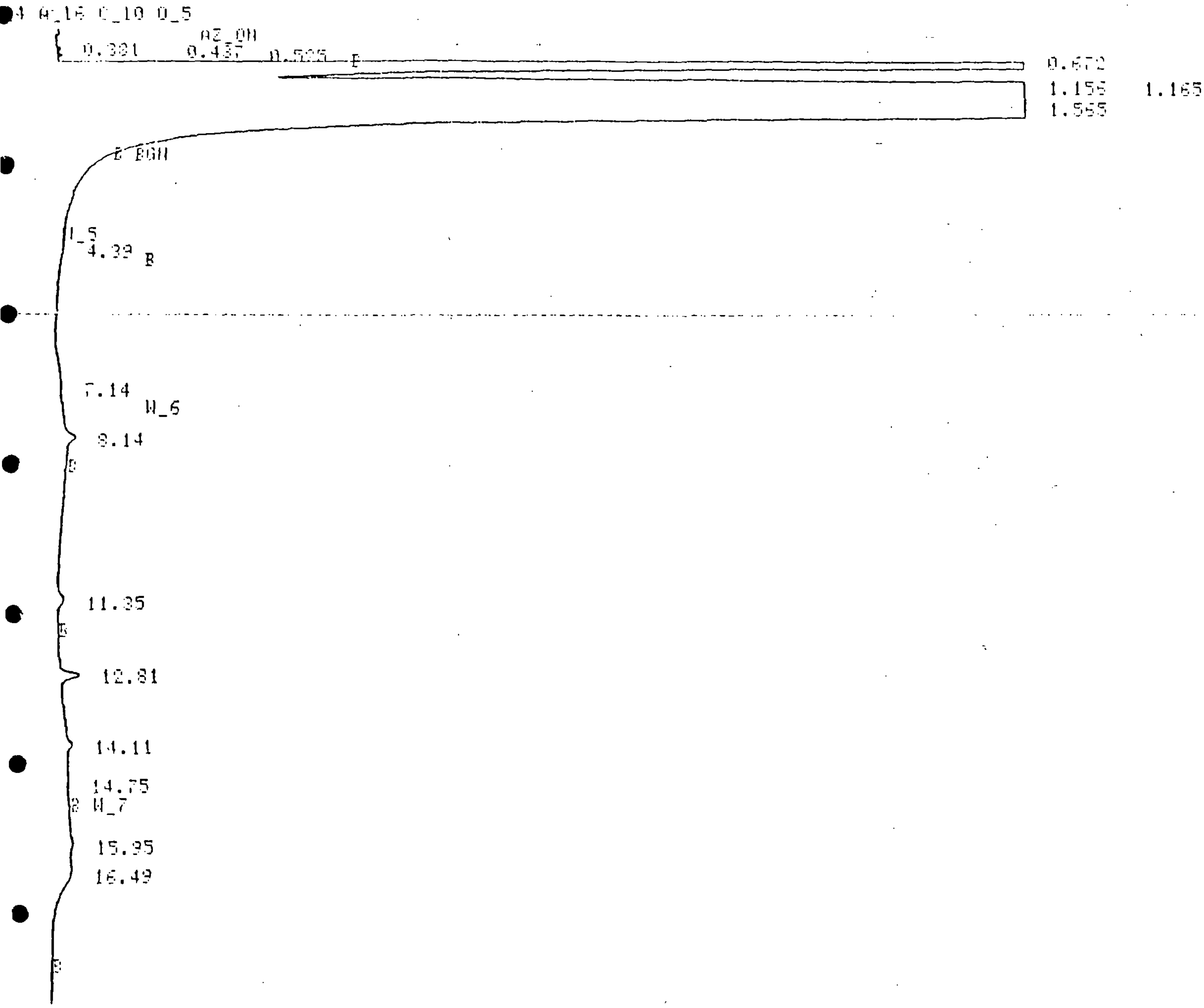
FILE 167 RUN 17 STARTED 14:37.9 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
7.09	1041	0.1173	V	0.9287	1.1167
8.10	22942	1.7828		20.4560	16.9795
11.19	19873	0.8753		17.7282	8.3369
12.79	41483	4.6765	V	37.0105	44.5390
14.10	13809	1.5138		12.3187	14.4175
15.95	12945	0.8392	V	11.5480	7.9929
16.47		0.6948			6.6174

6 PEAKS > AREA REJECT 112093 TOTAL AREA
7 PEAKS > HEIGHT REJECT 10.4997 TOTAL HEIGHT

KEYBOARD DIRECTED EVENTS

METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13 # 101220



LE 168 RUN 18 STARTED 14:58.1 87/10/09
METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

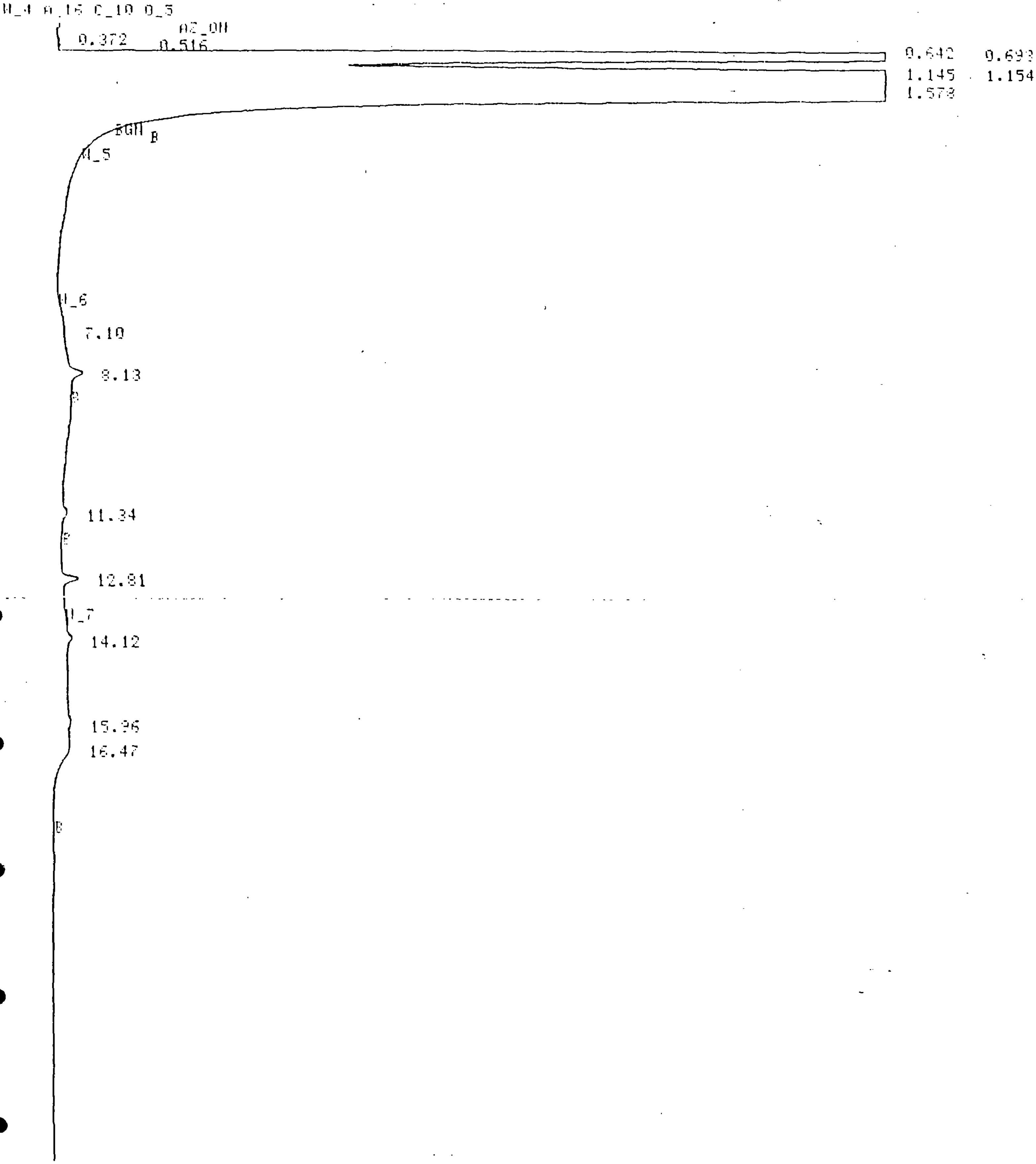
RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
.39	1391	0.1338		1.6442	1.6852
.14	1143	0.1113	V	1.3505	1.4021
.14	28131	1.7566		33.2514	22.1253
.35	13315	0.8997		15.7382	11.3326
.81	24316	3.0049	V	28.7419	37.8486
.11	8426	0.9143	V	9.9599	11.5161
.75	534	0.0799		0.6307	1.0062
.95	7346	0.4942	V	8.6833	6.2253
.49		0.5445			6.8586

8 PEAKS > AREA REJECT 84600 TOTAL AREA
9 PEAKS > HEIGHT REJECT 7.9393 TOTAL HEIGHT

KEYBOARD DIRECTED EVENTS

TIME	EVENT	VALUE
19.029	Stop Data	

FILE 169 RUN 19 STARTED 15:18.3 87/10/09 # 7092024
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



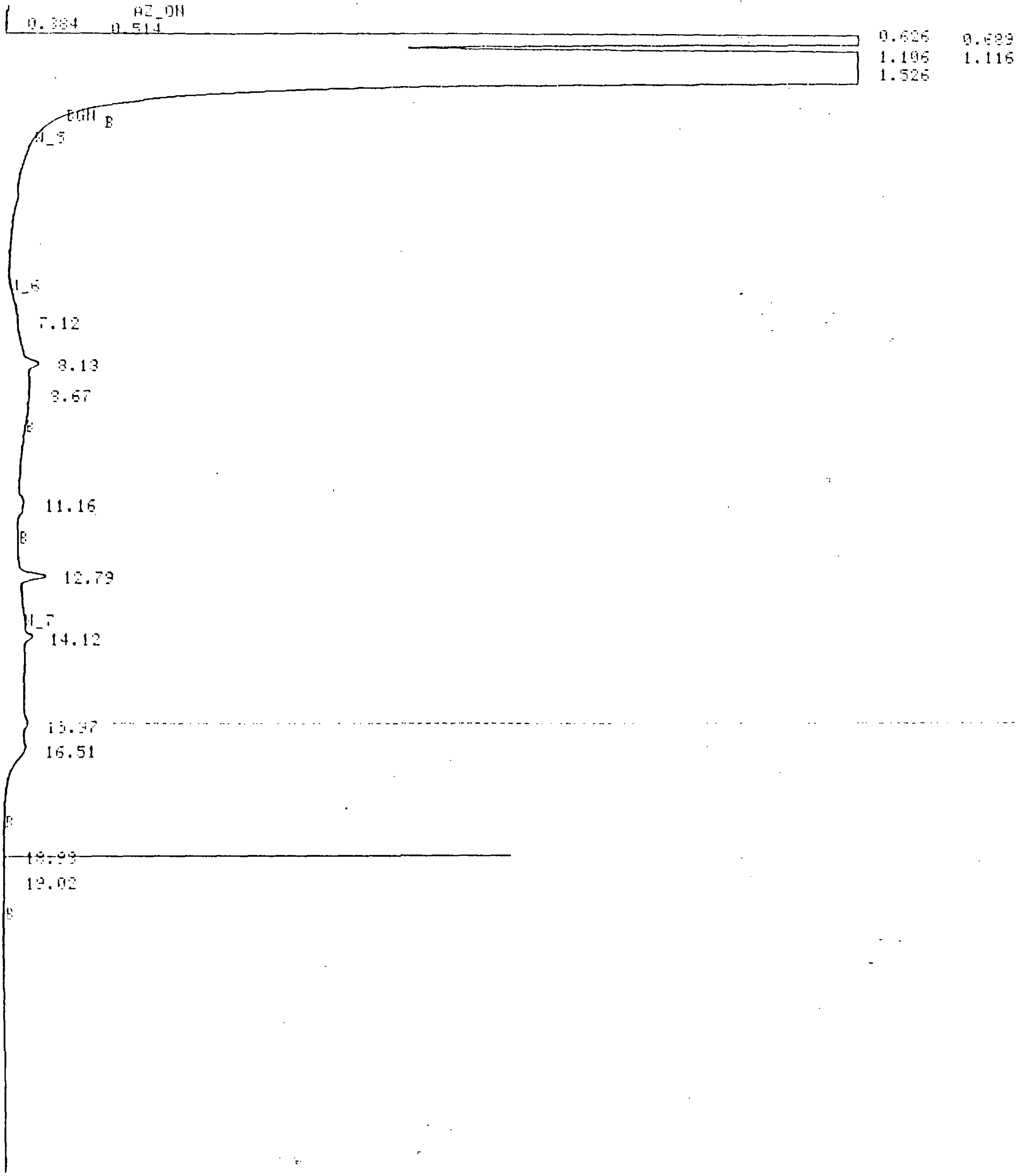
FILE 169 RUN 19 STARTED 15:18.3 87/10/09
% METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
7.10	1718	0.1912	U	[illegible]	[illegible]

FILE 159   RUN 9   STARTED 09:52.2 87/10/09
% METHOD 1 DIESELS HIGH BS   LAST EDITED 06:11.7 80/01/13

#7092021 (Duplicat

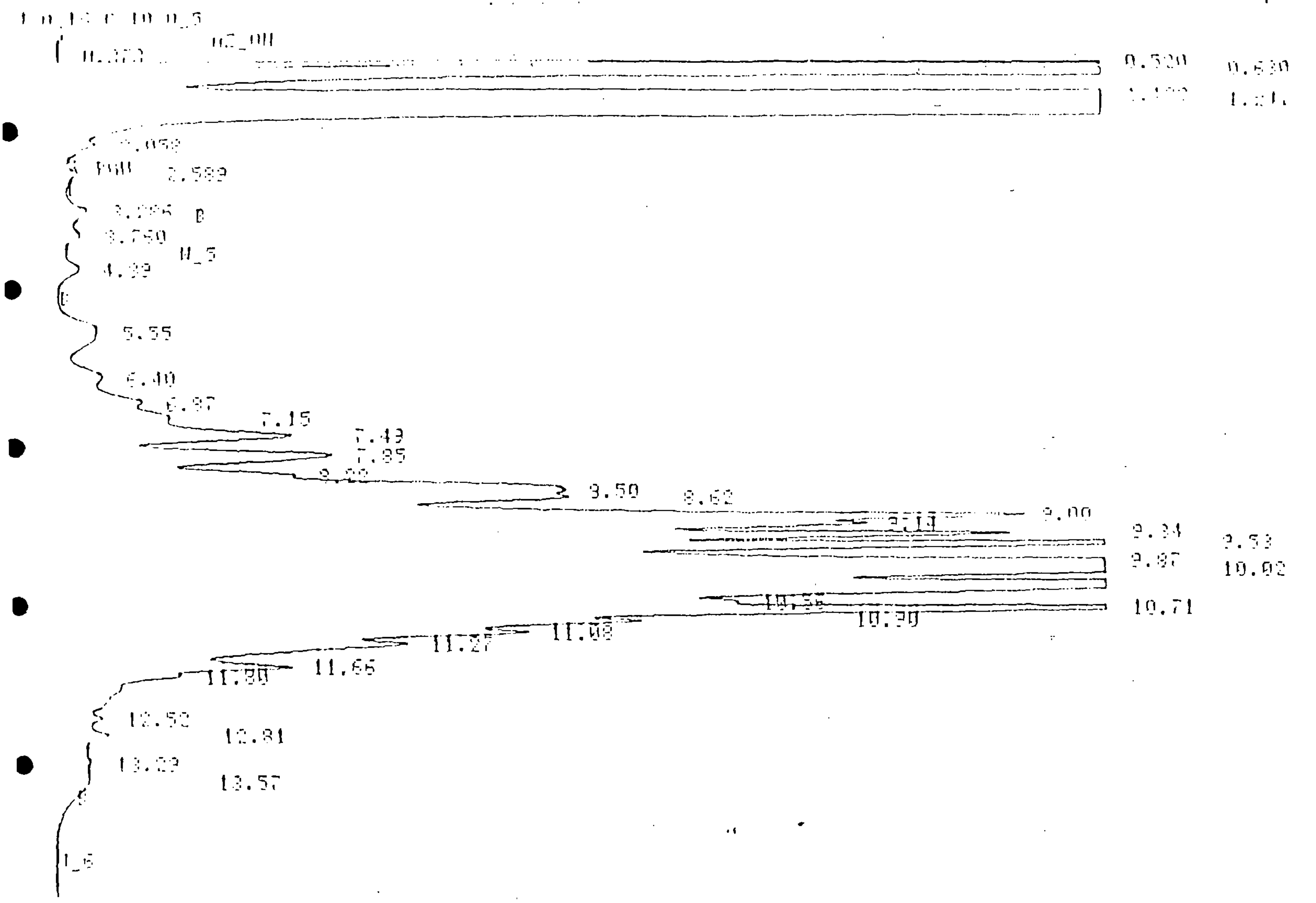
I A_16 C_10 D_5



FILE 159   RUN 9   STARTED 09:52.2 87/10/09
METHOD 1 DIESELS HIGH BS   LAST EDITED 06:11.7 80 01 13

PT	AREA	HEIGHT	PC	AREA PERCENT	HEIGHT PERCENT

FILE 135 RUN 5 STARTED 23:31.7 87/10/09 # 7092021 + spike
: METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13



FILE 135 RUN 5 STARTED 23:31.7 87/10/09
METHOD 1 DIESELS HIGH BS LAST EDITED 06:11.7 80/01/13

RT	AREA	HEIGHT	BC	AREA PERCENT	HEIGHT PERCENT
.589	17479	1.6125		0.3989	0.2745
.296	12914	1.5925		0.2947	0.2711
.750	5473	0.7529	V	0.1249	0.1282
.39	34308	2.4022		0.7829	0.4090
.55	146533	4.8239	V	3.3440	0.8212
.40	27307	2.1151	V	0.6232	0.3601
.87	15677	2.2595	V	0.3806	0.3221
.15	15199	1.7880	V	0.3468	0.3044
.49	233681	20.1956	V	5.3329	3.4381
85	311358	25.2079	V	7.1055	4.2914
22	19594	2.9139	V	0.4472	0.4961
50	147719	8.2737	V	3.3711	1.4085
62	48824	8.4372	V	1.1142	1.4364
00	319491	43.8212	V	7.2911	7.4602
14	56569	12.3351	V	1.2910	2.0999
34	274800	47.2464	V	6.2712	8.0433
53	614071	104.9910	V	14.0136	17.8738
87	141399	29.1129	V	3.2269	4.9562
02	159499	22.9763	V	3.6399	3.9115
29	779347	76.1132	V	17.7854	12.9575
55	6635	1.6559	V	0.1514	0.2819
71	646600	109.3858	V	14.7560	18.6220
90	51685	11.9757	V	1.1795	2.0389
08	[illegible]	12.0919	V	1.5[illegible]	[illegible]

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: K. Keeley
Date of Analysis: 10/09/87
Method of Analysis: EPA 601/602
Detection Limit: 0.5
Units: ppb

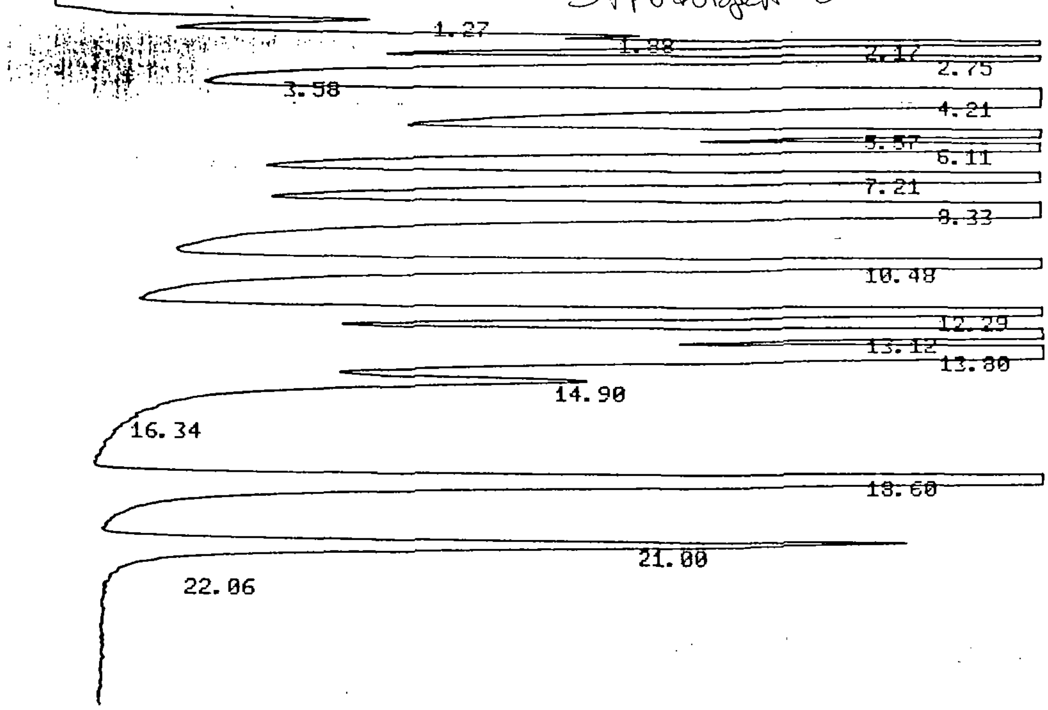
Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092018	11 DCA	310	300	1.6
	111 TCA	30	31	1.6

Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092015	Benzene	< 0.5	5.0	4.8	96

SEQUOIA ANALYTICAL LABORATORY

Scot Cocanour

Arthur G. Burton
Laboratory Director



HALL 10/09/87 20:07:35 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 304 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.27	1608739	02	
2	0.	1.88	1938421	02	
3	0.	2.17	6015002	02	
4	0.	2.75	7580212	02	
5	0.	3.58	233239	02	
6	0.	4.21	64036629	08	
7	0.	5.57	6429528	06	
8	0.	6.11	7453082	06	
9	0.	7.21	10516144	06	
10	0.	8.33	17926460	07	
11	0.	10.48	11763663	08	
12	0.	12.29	9080170	06	
13	0.	13.12	11853032	06	
14	0.	13.8	17601566	06	
15	0.	14.9	4006874	06	
16	0.	16.34	68987	07	
17	0.	18.6	13786490	01	
18	0.	21.	4663052	08	
19	0.	22.06	1777	05	
TOTALS	0.		196563067		

INPUT OVERRANGE AT RT= 5.68

PID 10/09/87 20:07:35 CH= "B" PS= 1.

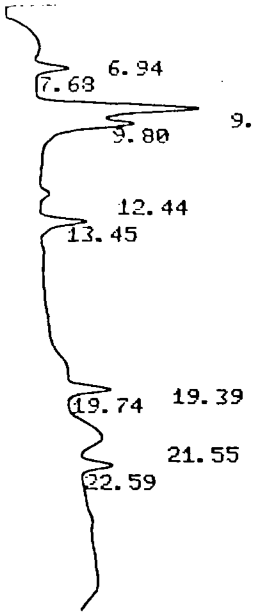
FILE 1. METHOD 5. RUN 297 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.24	324388	01	
2	0.	12.98	89668	01	
3	0.	14.78	24406	01	
4	0.	18.48	81888	01	
5	0.	20.88	184374	01	
TOTALS	0.		704724		

093

3ppb Purgeable mix B



119

INPUT OVERRANGE AT RT= 5.62

PID 10/09/87 09:01:26 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 317 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	6.94	155173	02	
2	0.	7.68	165472	03	
3	0.	9.2	1012900	02	
4	0.	9.8	650734	03	
5	0.	12.44	40581	01	
6	0.	13.45	223205	01	
7	0.	19.39	100032	02	
8	0.	19.74	225272	03	
9	0.	21.55	388192	02	
10	0.	22.59	156264	03	
TOTALS	0.		3117825		

HALL 10/09/87 09:01:26 CH= "A" PS= 1.

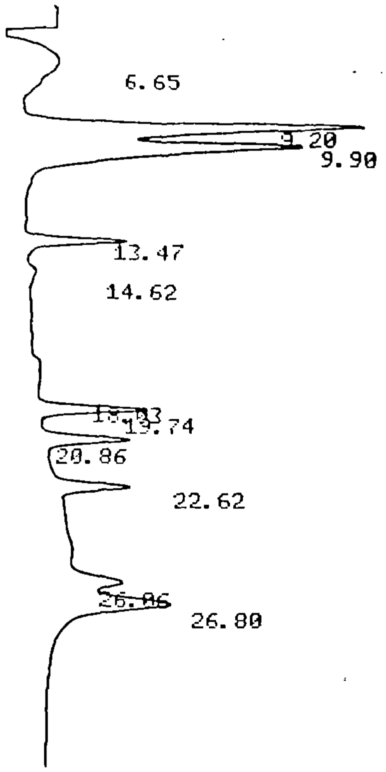
FILE 1. METHOD 5. RUN 324 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.73	351201	02	
2	0.	4.08	11161982	08	
3	0.	5.17	157489	06	
4	0.	5.3	457866	07	
5	0.	6.6	700	05	
6	0.	7.81	9380705	02	
7	0.	8.56	1060588	02	
8	0.	9.01	11241486	02	
9	0.	10.11	10844735	02	
10	0.	10.99	7808252	02	
11	0.	11.89	159517	02	
12	0.	12.57	9554562	02	
13	0.	13.87	4605732	02	
14	0.	14.64	210065	02	
15	0.	14.83	227737	03	
16	0.	16.47	1024168	02	
17	0.	16.91	64495	02	
18	0.	17.	170717	03	
19	0.	18.57	13285045	02	
20	0.	19.4	2721569	02	
21	0.	19.74	6018426	02	
22	0.	20.49	983133	02	
23	0.	21.61	31950449	02	
24	0.	23.36	106649	03	

CHANNEL B   INJECT 10/09/87 08:09:09

5 ppb Aromatic Mix
10 ppb MEK



INPUT OVERRANGE AT RT=   5.6

PID   10/09/87 08:09:09   CH= "B"   PS= 1.

FILE 1.   METHOD 5.   RUN 316   INDEX   1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	6.65	402463	01	
2	0.	9.2	2162369	02	
3	0.	9.9	2254006	03	
4	0.	13.47	415576	01	
5	0.	14.62	57208	01	
6	0.	18.03	69067	02	
7	0.	19.74	460365	02	
8	0.	20.86	381440	03	
9	0.	22.62	339108	01	
10	0.	26.06	422809	02	
11	0.	26.8	1009267	03	
TOTALS	0.		7973678		

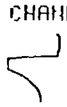
HALL   10/09/87 08:09:09   CH= "A"   PS= 1.

FILE 1.   METHOD 5.   RUN 323   INDEX   1

ANALYST: KWK

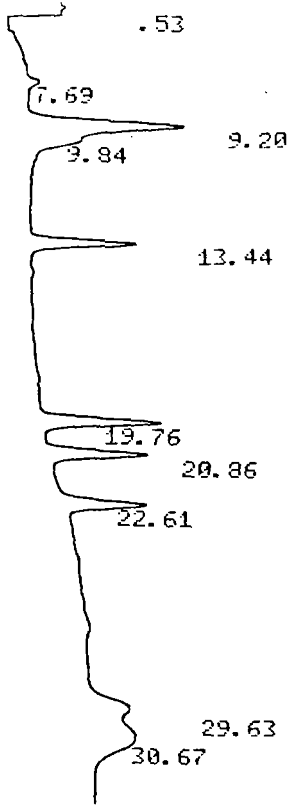
NAME	PPB	RT	AREA	BC	RF
1	0.	4.16	119356469	08	
2	0.	6.24	187078	06	
3	0.	6.48	1026596	07	
4	0.	8.99	25690057	05	
5	0.	13.12	211433	05	
6	0.	18.6	48460	01	
7	0.	20.98	9469857	01	
TOTALS	0.		155989950		

CHANNEL B   INJECT 10/09/87 09:01:26



709 2015
5ppb MEK spike

5ppb Aromatic
MEK



INPUT OVERRANGE AT RT= 5.64

PID 10/09/87 09:45:20 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 266 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	198062	01	
2	0.	7.69	41231	01	
3	0.	9.2	1028270	02	
4	0.	9.84	220416	03	
5	0.	13.44	407396	01	
6	0.	19.76	483587	01	
7	0.	20.86	419283	01	
8	0.	22.61	361736	01	
9	0.	29.63	380239	02	
10	0.	30.67	658672	03	
TOTALS	0.		4198892		

HALL 10/09/87 09:45:20 CH= "A" PS= 1.

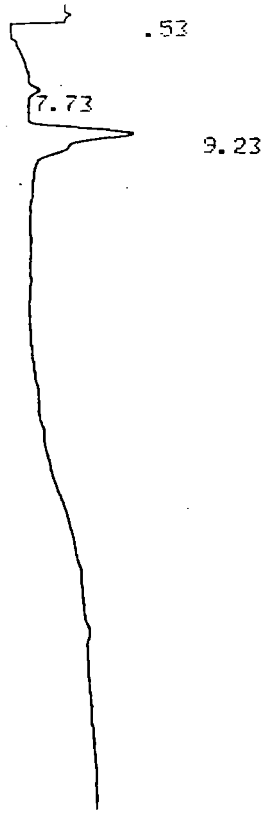
FILE 1. METHOD 5. RUN 272 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.21	338251	02	
2	0.	3.64	229595	02	
3	0.	4.09	24467990	08	
4	0.	5.4	68616	05	
5	0.	6.09	2682222	06	
6	0.	7.17	19458934	06	
7	0.	7.8	5866507	06	
8	0.	8.58	4932491	06	
9	0.	9.01	1606154	06	
10	0.	10.09	1100806	07	
11	0.	13.08	539396	01	
12	0.	18.58	156417	01	
13	0.	20.98	10525034	01	

Lab 7092015.

709 2015



052

INPUT OVERRANGE AT RT= 5.64

PID 10/09/87 10:29:02 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 267 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	9639	01	
2	0.	7.73	37785	01	
3	0.	9.23	835672	01	
TOTALS	0.		883096		

HALL 10/09/87 10:29:02 CH= "A" PS= 1.

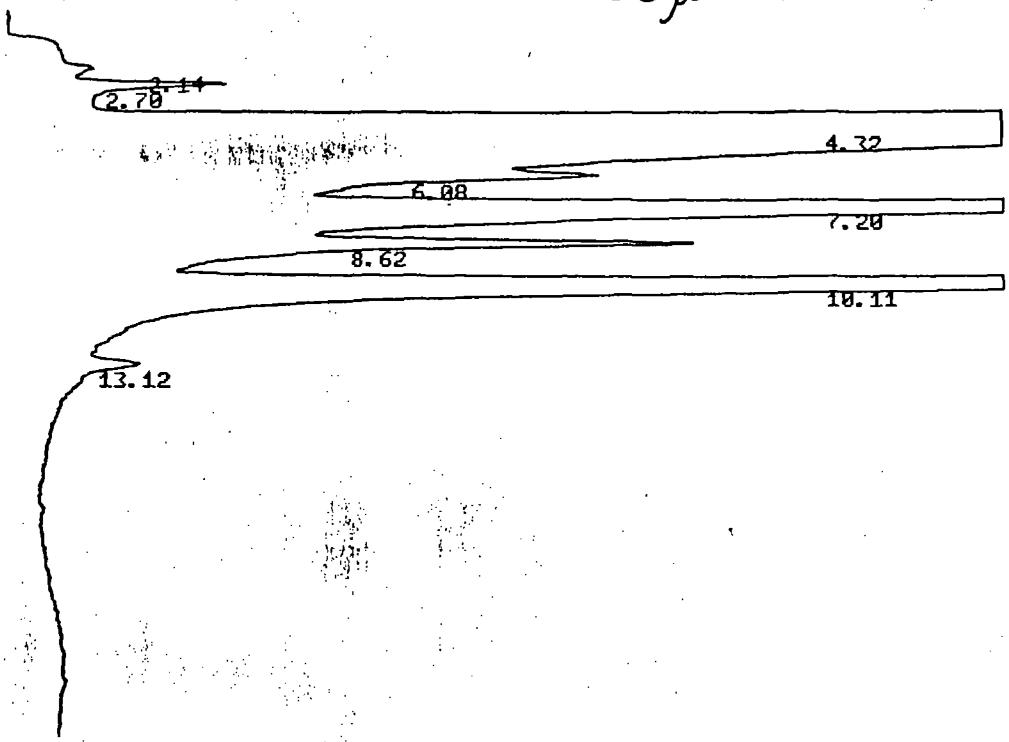
FILE 1. METHOD 5. RUN 273 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.16	83976	02	
2	0.	3.37	197279	02	
3	0.	3.6	212752	02	
4	0.	4.12	16386756	08	
5	0.	5.3	1346	05	
6	0.	5.49	29285	05	
7	0.	6.1	2063285	06	
8	0.	6.68	72276	06	
9	0.	7.2	14962960	06	
10	0.	7.84	4362981	06	
11	0.	8.25	452819	06	
12	0.	8.61	1936280	06	
13	0.	9.09	973177	06	
14	0.	10.13	827207	07	
15	0.	13.12	432599	01	
16	0.	18.58	76849	01	
TOTALS	0.		43071927		

5mls # 7092016.

CHANNEL A INJECT 50µl 1072016



HALL CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 339 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.14	160695	02	
2	0.	2.7	862669	02	
3	0.	4.32	119696708	08	
4	0.	6.08	565281	05	
5	0.	7.2	18849125	06	
6	0.	8.62	2902026	06	
7	0.	10.11	21959174	07	
8	0.	13.12	279740	05	
TOTALS	0.		165275418		

INPUT OVERRANGE AT RT= 4.7

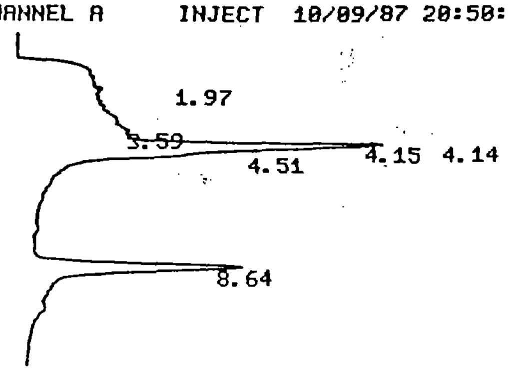
PID CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 332 INDEX 1

ANALYST: KWK

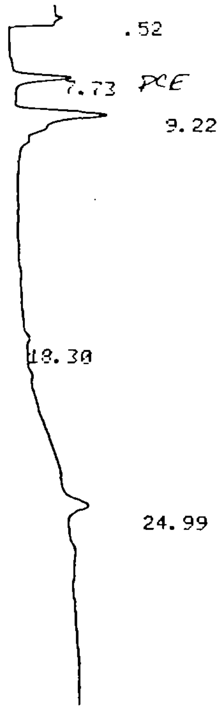
NAME	PPB	RT	AREA	BC	RF
1	0.	9.29	130860	01	
TOTALS	0.		130860		

CHANNEL A INJECT 10/09/87 20:50:22 D.L.



139

7092017



INPUT OVERRANGE AT RT= 5.74

PID 10/09/87 12:44:13 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 270 INDEX 1 057

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.52	12618	01	
2	0.	7.73	257353	01	
3	0.	9.22	742561	01	
4	0.	18.3	1917749	02	
5	0.	24.99	751692	03	
TOTALS	0.		3681973		

HALL 10/09/87 12:44:12 CH= "A" PS= 1.

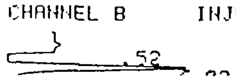
FILE 1. METHOD 5. RUN 276 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	1.55	307228	02	
2	0.	1.58	14872	02	
3	0.	1.68	7677	03	
4	0.	1.96	14016	02	
5	0.	2.19	1374565	02	
6	0.	2.82	343029	02	
7	0.	2.91	384899	02	
8	0.	3.44	846001	02	
9	0.	3.56	279263	02	
10	0.	4.42	18639577	08	
11	0.	6.11	2677258	06	
12	0.	7.21	25551653	06	
13	0.	7.85	27379757	06	
14	0.	9.08	536672	06	
15	0.	9.6	22214	06	
16	0.	10.1	3627342	06	
17	0.	11.28	54191	06	
18	0.	11.54	7024	07	
19	0.	11.73	364	05	
20	0.	12.03	1090	05	
21	0.	13.14	725127	06	
22	0.	13.88	64307	07	
23	0.	18.56	129042	01	
TOTALS	0.		182987168		

6mls #7092018.

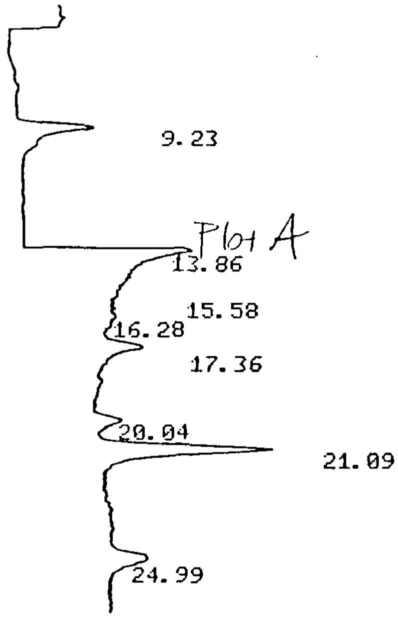
CHANNEL B INJECT 10/09/87 13:24:19



TOTALS 0. 5396614

7092016
Sml

CHANNEL B INJECT



HALL CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 295 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.6	81030	03	
2	0.	2.21	324820	02	
3	0.	2.81	9784845	08	
4	0.	4.19	5788797	06	
5	0.	5.24	189287	06	
6	0.	5.5	149799	06	
7	0.	6.16	4801694	06	
8	0.	7.54	119797986	06	
9	0.	9.05	7509663	06	
10	0.	10.14	10451562	06	
11	0.	12.	246932	06	
12	0.	12.25	531206	06	
13	0.	13.05	412542	06	
14	0.	13.86	793205	06	
15	0.	15.58	201	07	
16	0.	16.28	12830	01	
17	0.	17.36	249446	01	
18	0.	20.04	144770	02	
19	0.	21.09	994594	03	
20	0.	24.99	280376	01	
TOTALS	0.		162544585		

INPUT OVERRANGE AT RT= 5.72

PID CH= "B" PS= 1.

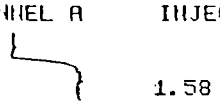
FILE 1. METHOD 5. RUN 289 INDEX 1

ANALYST: KWK

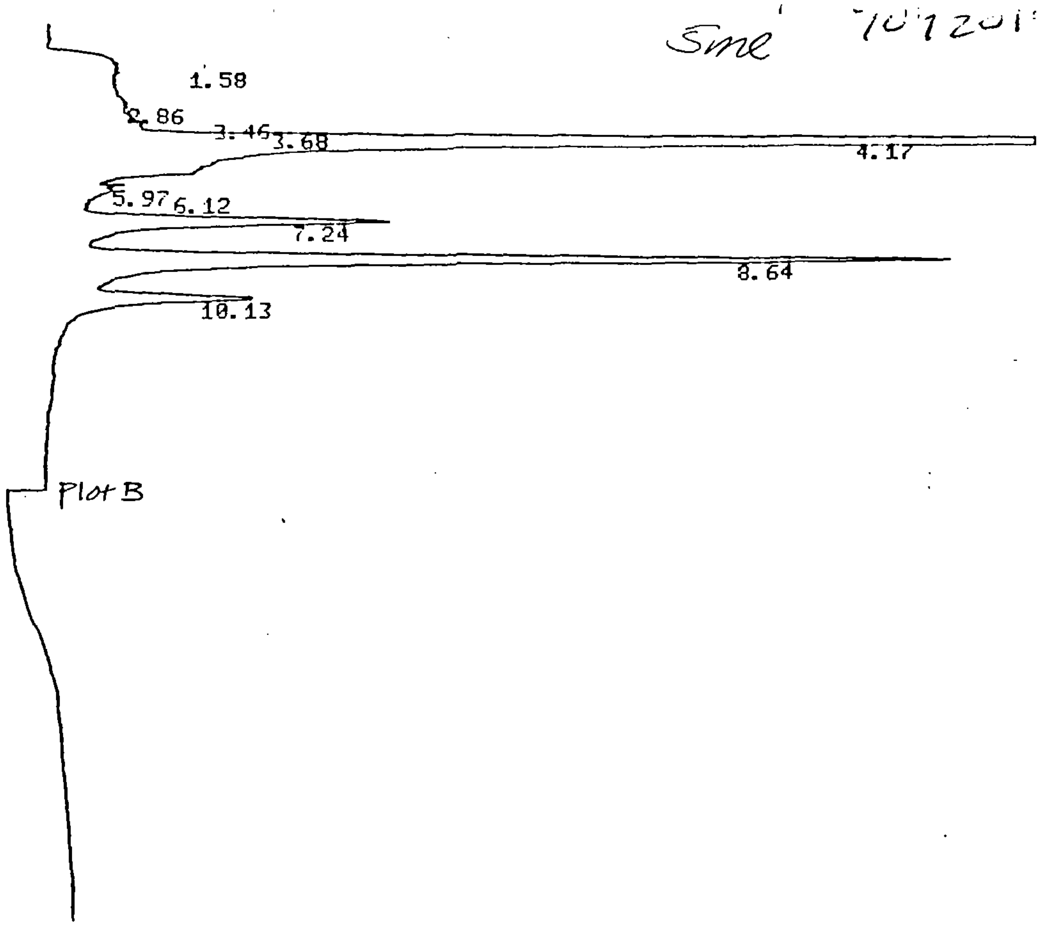
NAME	PPB	RT	AREA	BC	RF
1	0.	9.23	366738	01	
2	0.	19.79	353389	01	
TOTALS	0.		720127		

7092019
Sml

CHANNEL A INJECT



Sme 7072011



INPUT OVERRANGE AT RT= 5.71

PID CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 290 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.52	11944	01	
2	0.	9.24	305585	01	
TOTALS	0.		317529		

034

HALL CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 296 INDEX 1

ANALYST: KWK

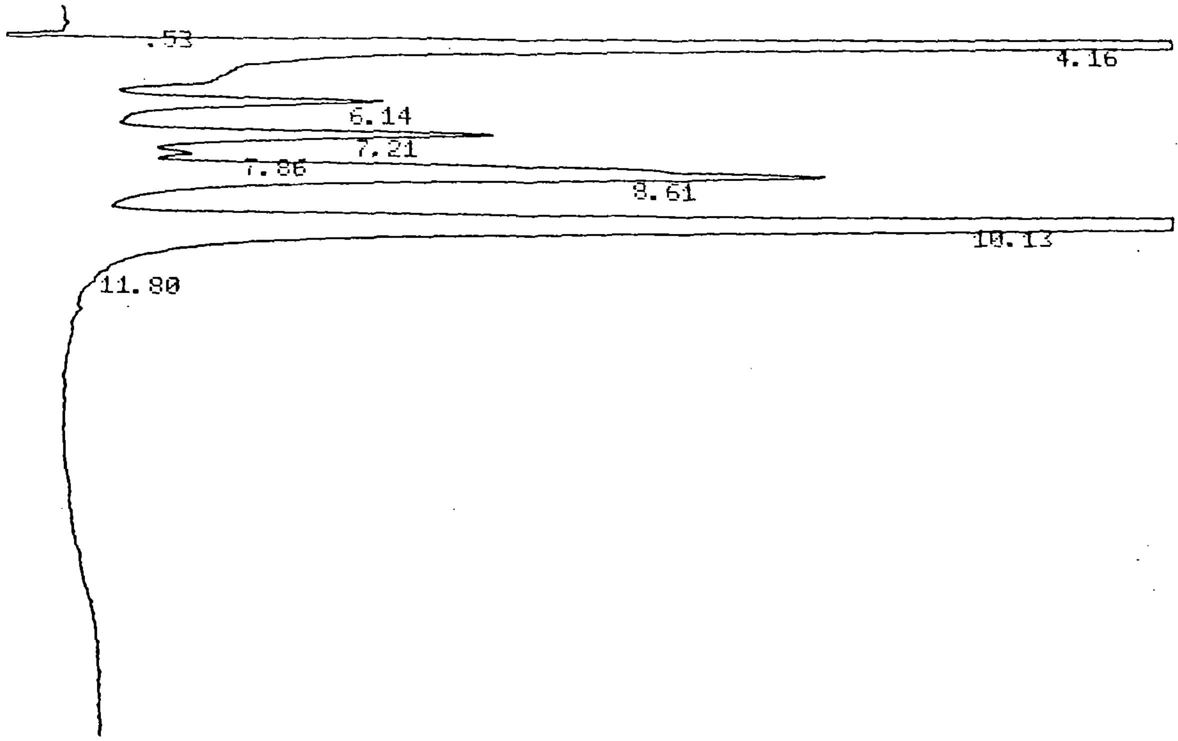
NAME	PPB	RT	AREA	BC	RF
1	0.	1.58	610972	01	
2	0.	2.86	88427	02	
3	0.	3.46	57663	02	
4	0.	3.68	164796	02	
5	0.	4.17	11776659	08	
6	0.	5.97	25011	06	
7	0.	6.12	39876	07	
8	0.	7.24	1753501	02	
9	0.	8.64	5446782	08	
10	0.	10.13	938930	05	
11	0.	18.62	278278	01	
TOTALS	0.		21180895		

DATE"10/9/87
TIME"15:52:00
15:52:02

HALL CH= "A" PS= 1.

1012020
5ml

CHANNEL B INJECT 10/09/87 15:54:06



HALL 10/09/87 15:54:06 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 298 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.26	115454	02	
2	0.	3.6	146733	02	
3	0.	4.16	12623708	08	
4	0.	6.14	1106722	06	
5	0.	7.21	1715453	06	
6	0.	7.86	286080	06	
7	0.	8.61	5582092	06	
8	0.	10.13	15464954	06	
9	0.	11.8	24663	07	
TOTALS	0.		37065859		

INPUT OVERRANGE AT RT= 5.73

PID 10/09/87 15:54:06 CH= "B" PS= 1.

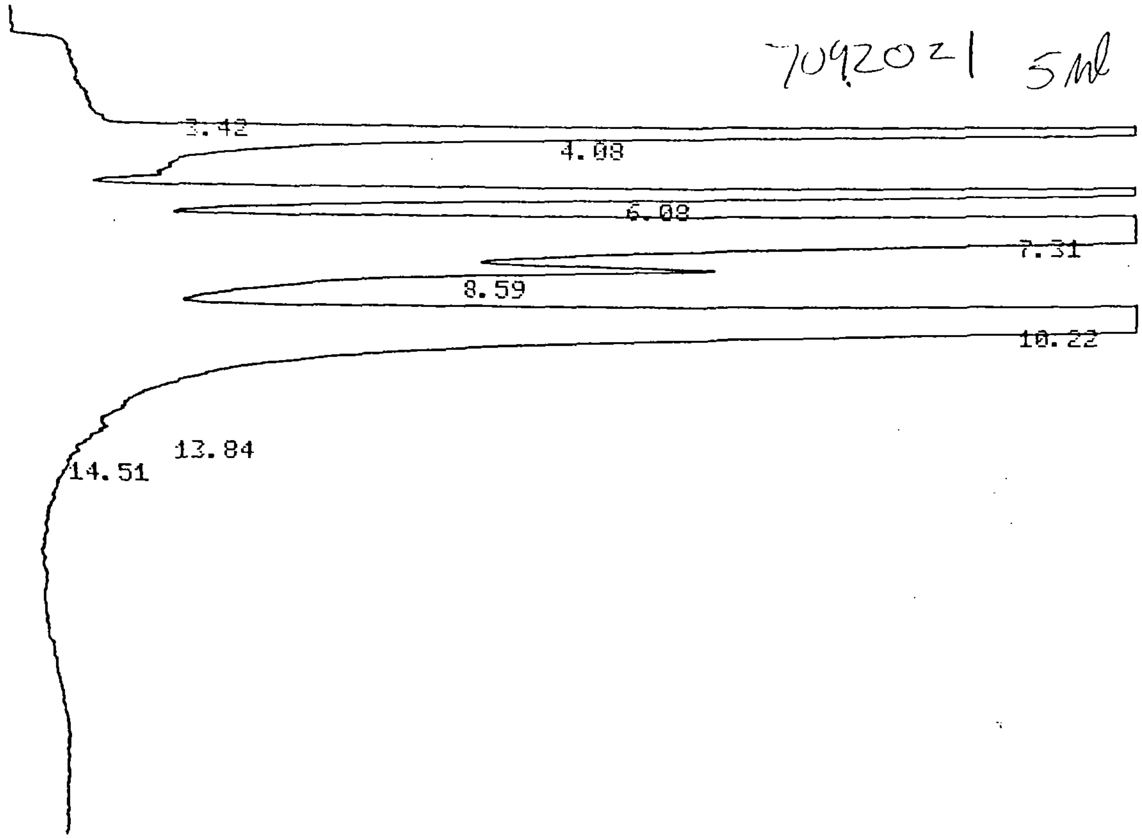
FILE 1. METHOD 5. RUN 291 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	226379	01	
2	0.	9.24	228772	01	
3	0.	13.46	197588	01	
TOTALS	0.		652739		

CHANNEL A   INJECT 10/09/87 16:45:31

7092021   5ml



HALL   10/09/87 16:45:31   CH= "A"   PS= 1.

FILE 1.   METHOD 5.   RUN 299   INDEX   1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.42	106719	02	
2	0.	4.08	10881534	02	
3	0.	6.08	8507973	02	
4	0.	7.31	73642143	02	
5	0.	8.59	5215724	02	
6	0.	10.22	78473145	02	
7	0.	13.84	465483	02	
8	0.	14.51	271316	03	
TOTALS	0.		177564037		

PLOT "B" AUTO

ER 0

INPUT OVERRANGE AT RT=   5.59

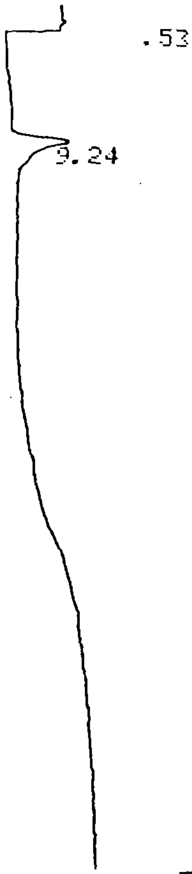
PID   10/09/87 16:45:31   CH= "B"   PS= 1.

FILE 1.   METHOD 5.   RUN 292   INDEX   1

ANALYST: KWK

CHANNEL B   INJECT 10/09/87 17:25:41

M092022
5ml



ER 0

INPUT OVERRANGE AT RT=   5.76

PID   10/09/87 17:25:41   CH= "B" PS= 1.

FILE 1.   METHOD 5.   RUN 293   INDEX   1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.53	224524	01	
2	0.	9.24	364721	01	
TOTALS	0.		589245		

HALL   10/09/87 17:25:41   CH= "A" PS= 1.

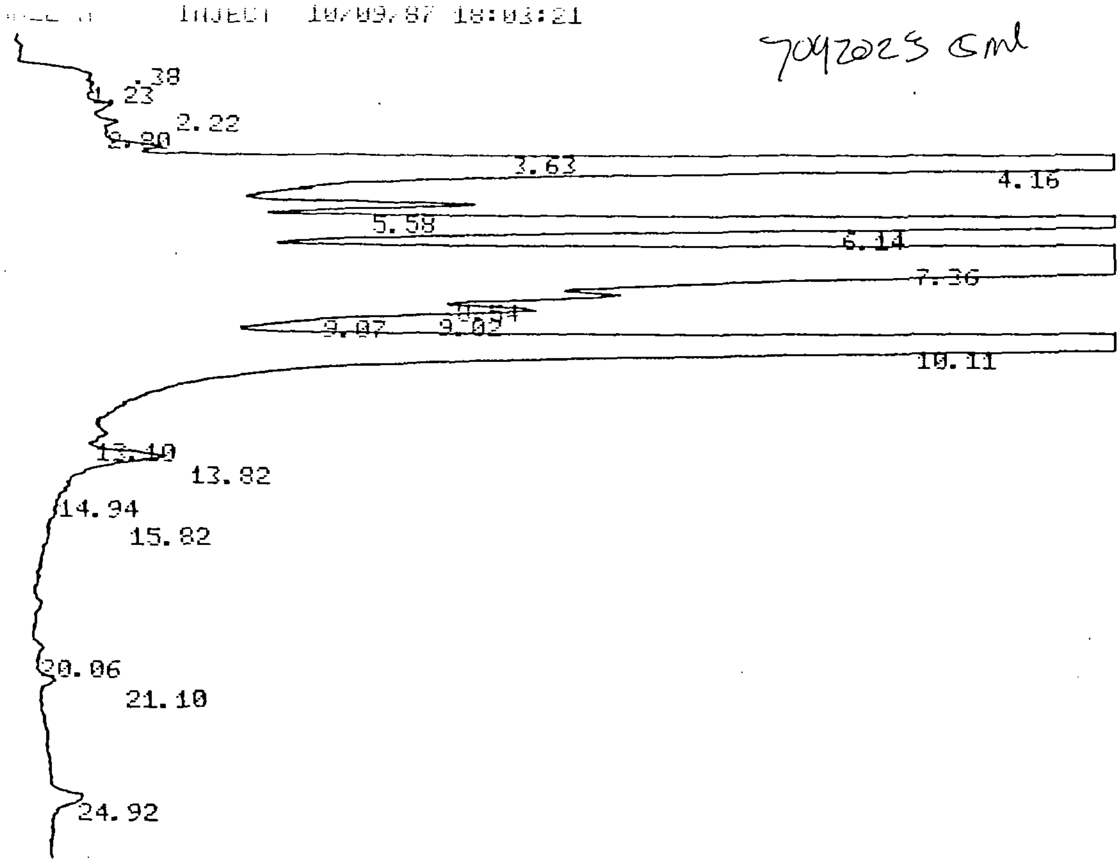
FILE 1.   METHOD 5.   RUN 300   INDEX   1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	3.66	32209	02	
2	0.	4.16	7450141	08	
3	0.	5.11	9949	06	
4	0.	5.22	509	07	
5	0.	5.54	203775	01	
6	0.	6.12	491584	01	
7	0.	7.24	10560293	02	
8	0.	8.35	1225958	02	
9	0.	8.63	1186116	02	
10	0.	9.13	84600	03	
11	0.	10.13	6922285	01	
12	0.	13.07	16633	01	

INJECT 10/09/87 18:03:21

7092025 6ml



089

HALL 10/09/87 18:03:21 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 301 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.38	19284	02	
2	0.	1.23	935918	02	
3	0.	2.22	588357	02	
4	0.	2.8	808003	02	
5	0.	3.63	699093	02	
6	0.	4.16	27300924	02	
7	0.	5.58	2209708	02	
8	0.	6.14	14739325	02	
9	0.	7.36	81179674	02	
10	0.	8.54	2930880	02	
11	0.	9.02	1172500	02	
12	0.	9.07	2508080	02	
13	0.	10.11	34232447	08	
14	0.	13.1	74841	06	
15	0.	13.82	499261	06	
16	0.	15.82	3580	07	
17	0.	20.06	52298	06	
18	0.	21.1	85473	07	
19	0.	24.92	198842	01	
TOTALS	0.		170238488		

INPUT OVERRANGE AT RT= 5.75

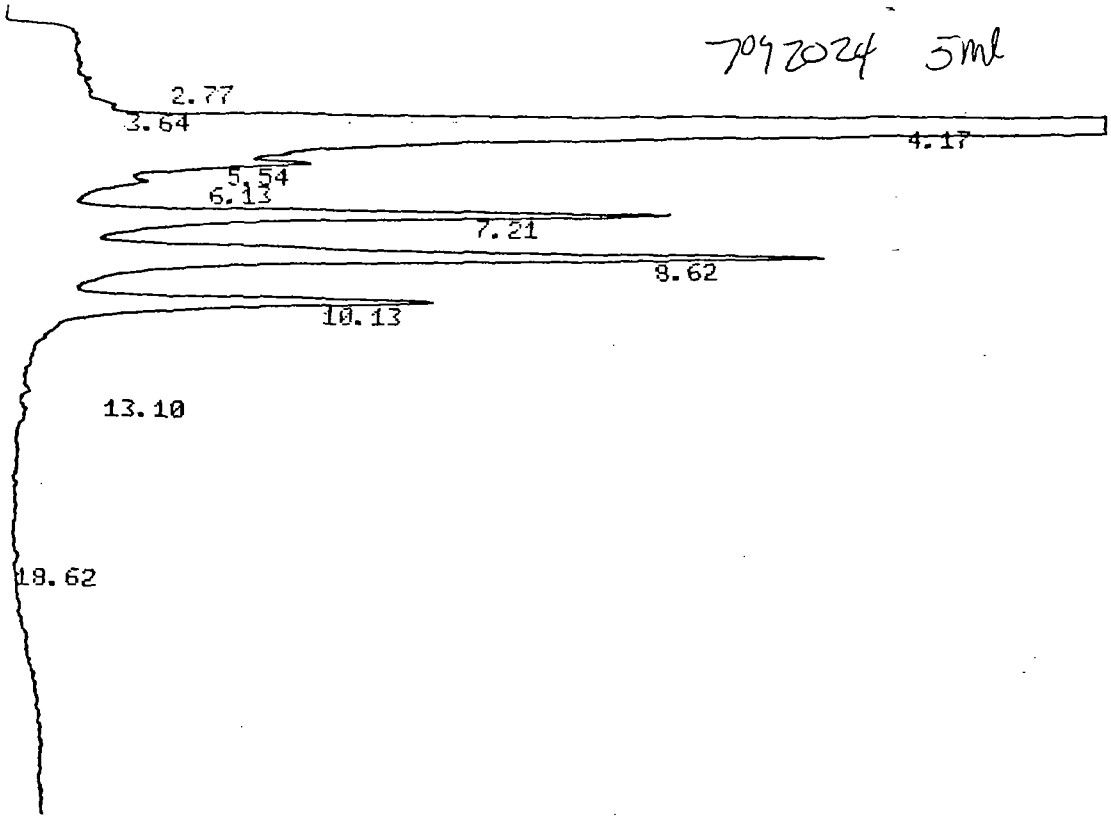
PID 10/09/87 18:03:21 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 294 INDEX 1

ANALYST: KWK

NAME PPB RT AREA BC RF

7042024 5ml



HALL 10/09/87 18:43:28 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 302 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.77	96324	02	
2	0.	3.64	165236	02	
3	0.	4.17	36485424	08	
4	0.	5.54	253453	05	
5	0.	6.13	85596	05	
6	0.	7.21	2999138	06	
7	0.	8.62	4768364	06	
8	0.	10.13	2250336	07	
9	0.	13.1	12684	01	
10	0.	18.62	16054	01	
TOTALS	0.		47132609		

INPUT OVERRANGE AT RT= 5.72

PID 10/09/87 18:43:28 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 295 INDEX 1

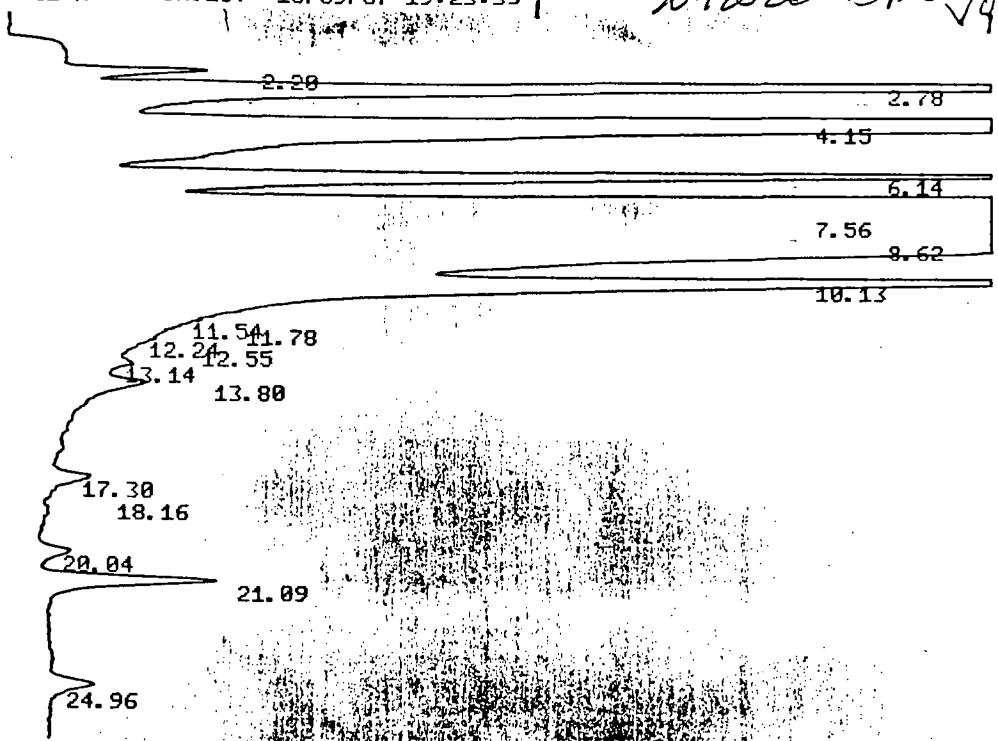
ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	0.52	12412	01	
2	0.	9.24	304469	01	
TOTALS	0.		316881		

090

31

CHANNEL A INJECT 10/09/87 19:23:33 7090025 SMe V4



HALL 10/09/87 19:23:33 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 303 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	2.2	612349	02	
2	0.	2.78	15665469	08	
3	0.	4.15	29940640	06	
4	0.	6.14	5511797	06	
5	0.	7.56	16161258	06	
6	0.	8.62	18381436	06	
7	0.	10.13	10600312	06	
8	0.	11.54	348544	06	
9	0.	11.78	522881	06	
10	0.	12.24	302296	06	
11	0.	12.55	224269	06	
12	0.	13.14	333441	06	
13	0.	13.8	663797	07	
14	0.	17.3	266506	02	
15	0.	18.16	7919	03	
16	0.	20.04	174076	02	
17	0.	21.09	1021699	03	
18	0.	24.96	280707	01	
TOTALS	0.		201019396		

INPUT OVERRANGE AT RT= 5.72

PID 10/09/87 19:23:34 CH= "B" PS= 1.

FILE 1. METHOD 5. RUN 296 INDEX 1

ANALYST: KWK

NAME	PPB	RT	AREA	BC	RF
1	0.	9.25	356867	01	
TOTALS	0.		356867		

092

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: W. Amundson
Date of Analysis: 10/12/87
Method of Analysis: EPA 625
Detection Limit: 10
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092018	Pentachlor-ophenol	< 10	< 10	0.0

Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092015	4,4-Dibromo-biphenyl	0	20	17	86
	D8-Naphthalene	0	20	15	74
	2-Fluorophenol	0	20	11	57
	Pentafluoro-phenol	0	20	7.4	37

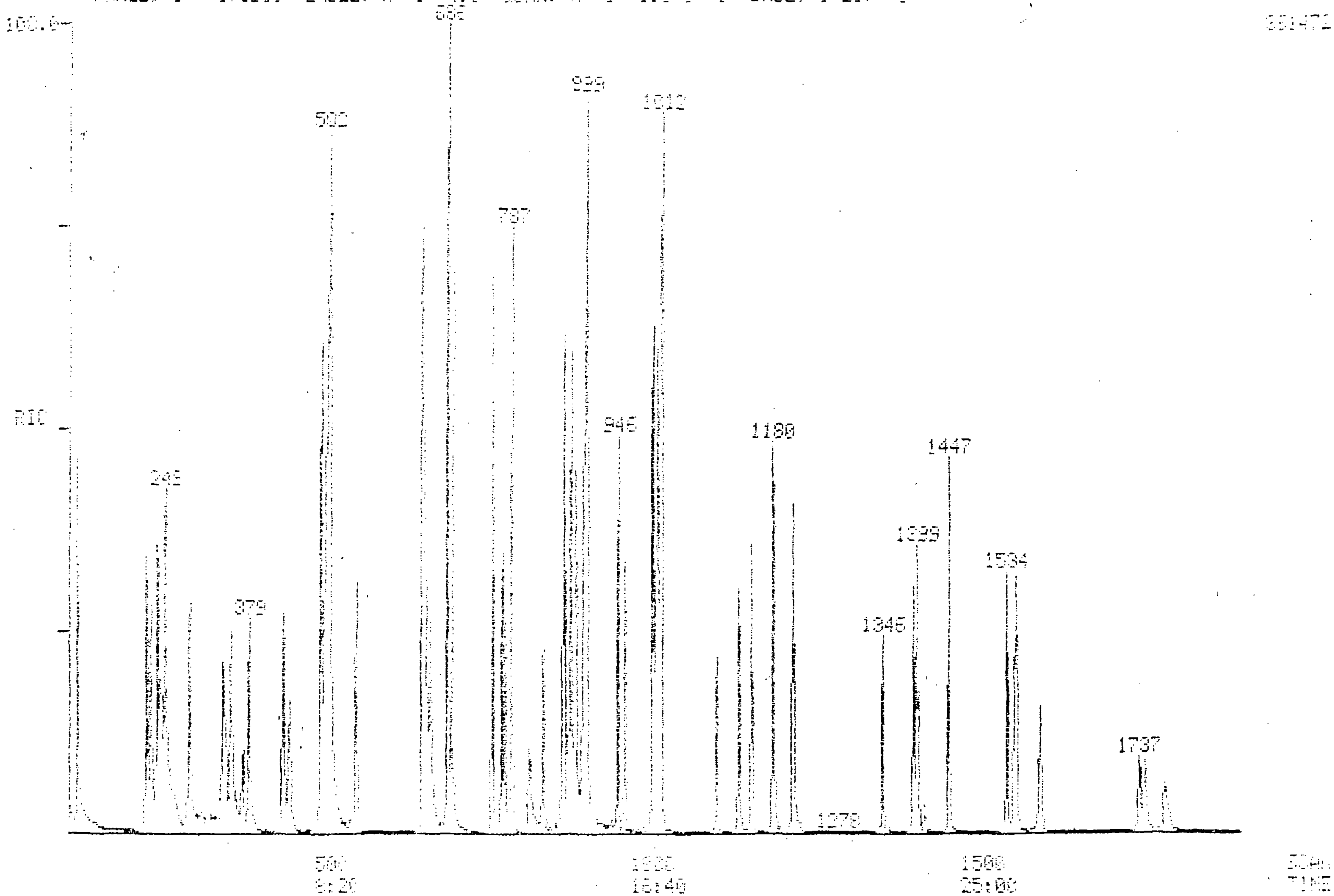
SEQUOIA ANALYTICAL LABORATORY

Scot Cocanour

Arthur G. Burton
Laboratory Director

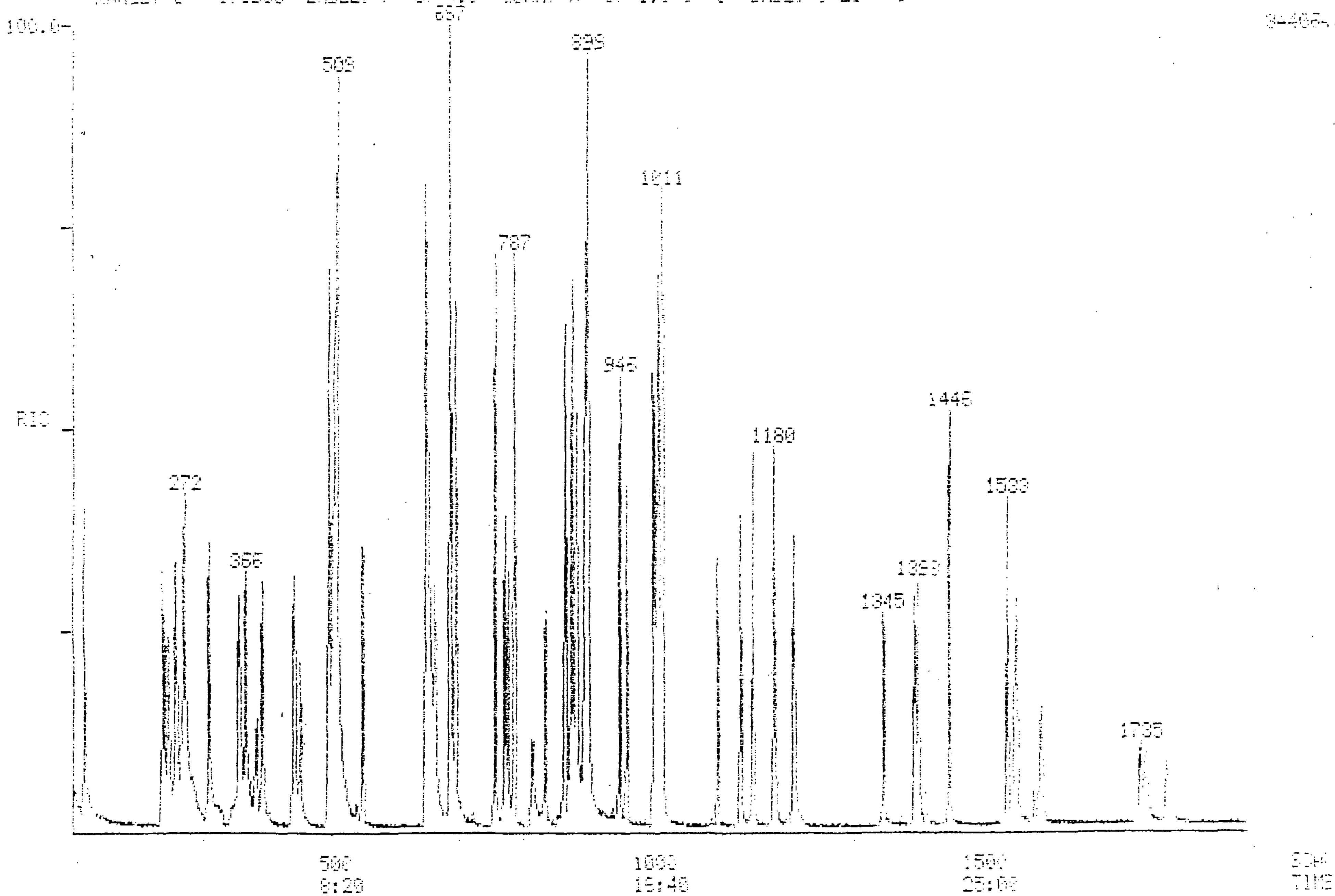
RIC
10/12/87 13:24:00
SAMPLE: BNA STD (40-200NG)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: BNASTD1012 #1 SCANS 100 TO 1900
CALI: BNASTD1012 #2



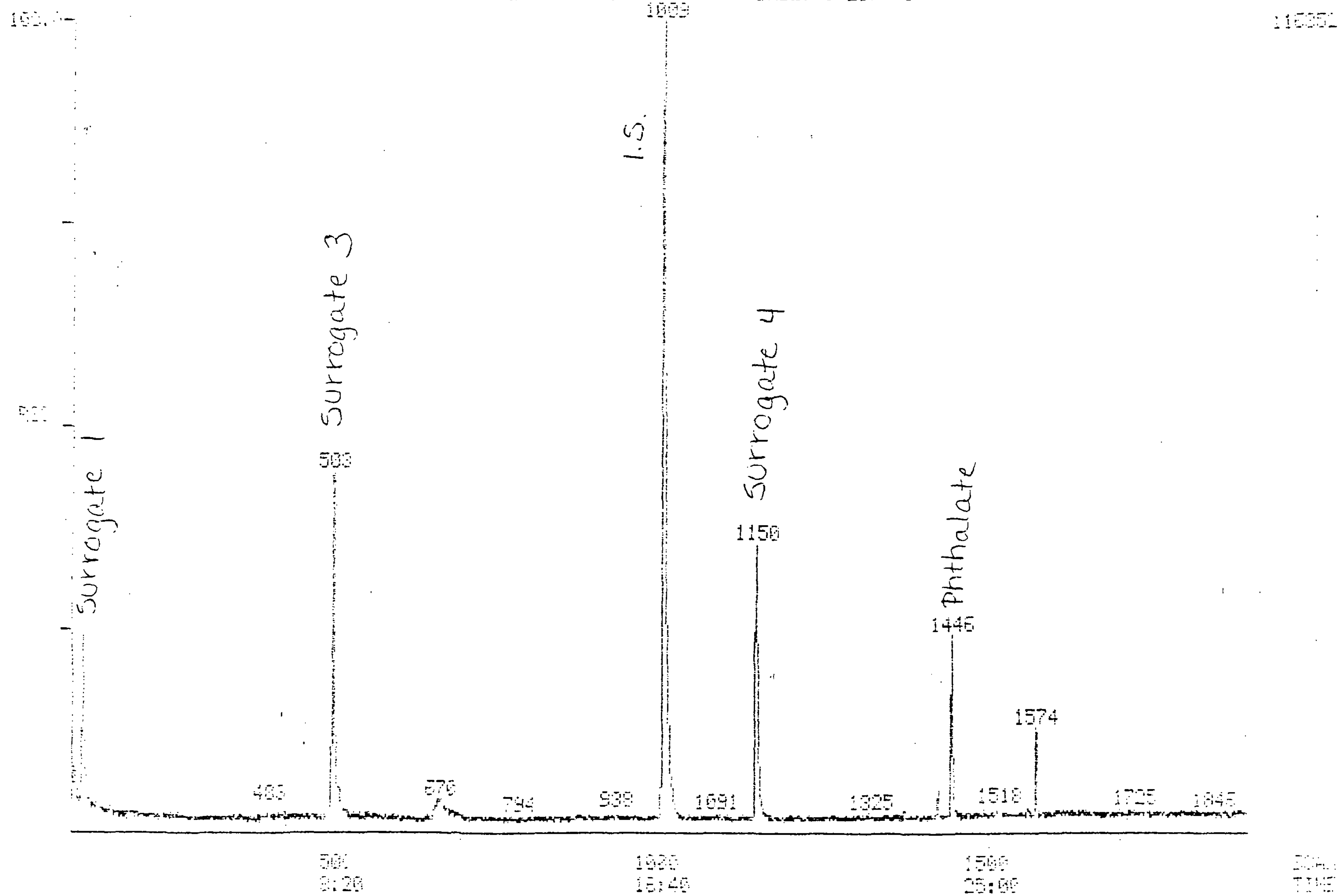
RIC
10/13/87 8:39:00
SAMPLE: BNA STD (40-200UG)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: BNASTD1013 #1 SCANS 100 TO 1900
CALI: BNASTD1013 #2



RIC
10/13/87 9:35:00
SAMPLE: BNA METHOD BLANK (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

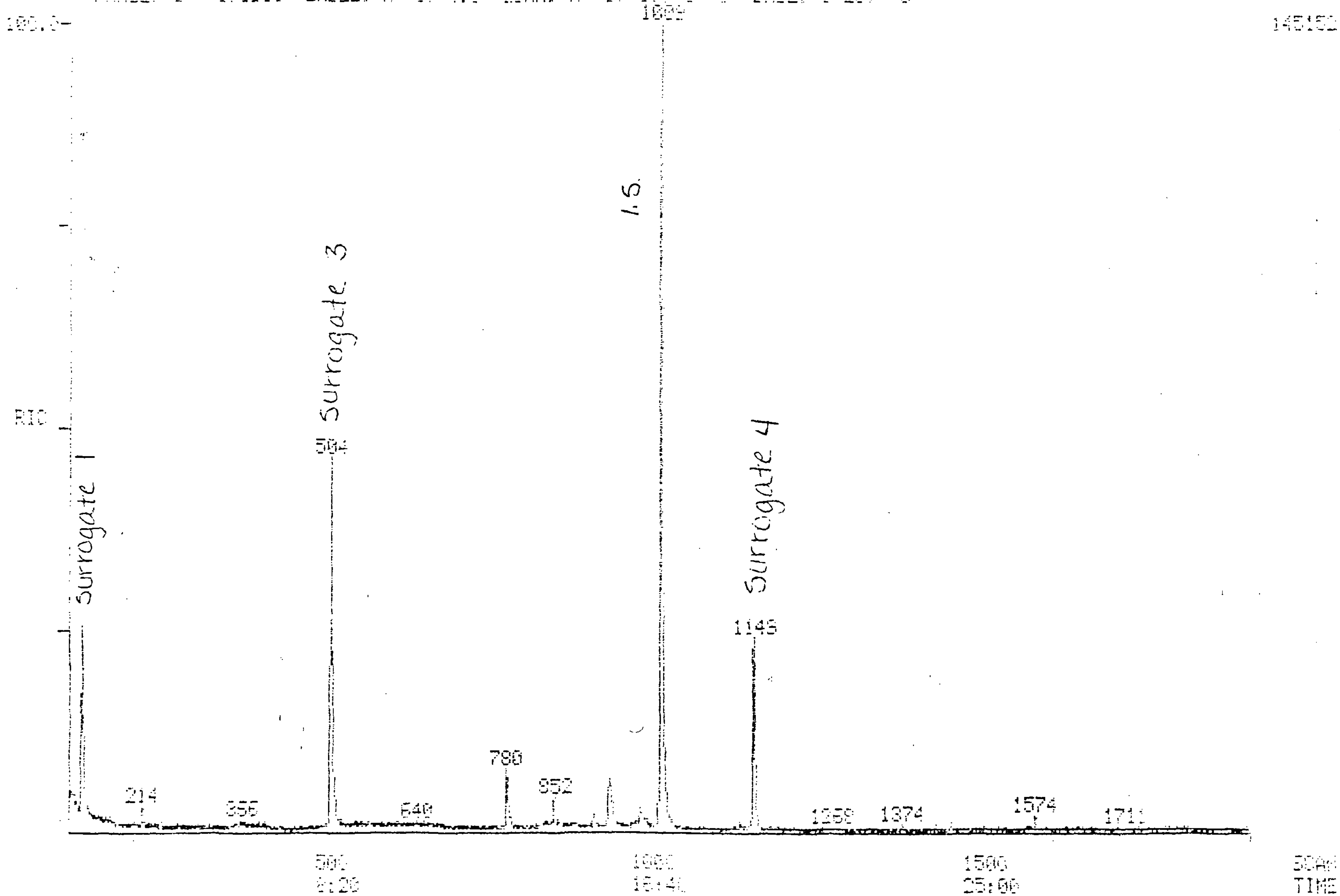
DATA: BNABLK1008 #1574 SCANS 100 TO 1900
CALI: BNABLK1009 #2



RIC
10/12/87 14:14:00
SAMPLE: ?-1 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

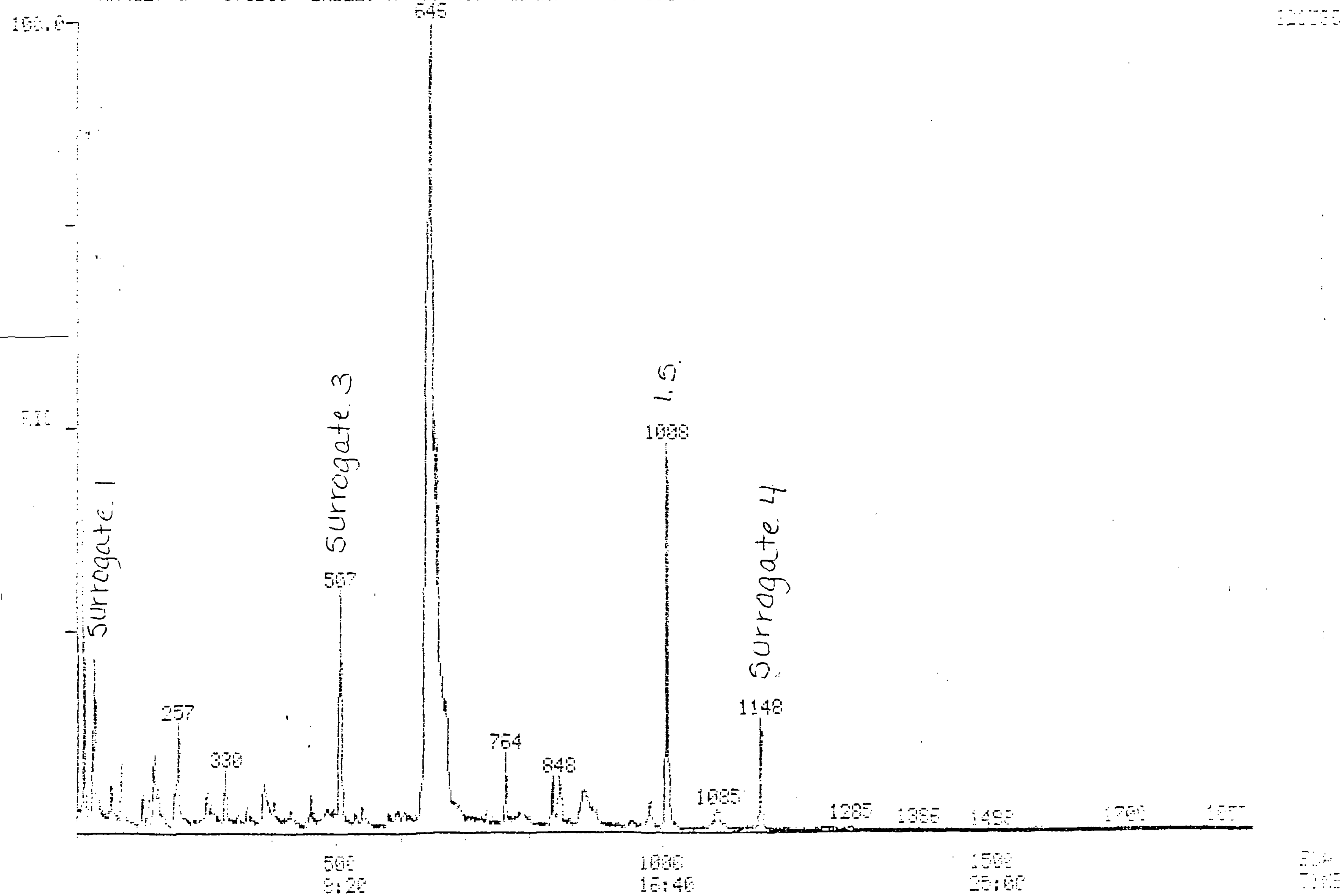
DATA: AN7092015 #1
CALI: AN7092015 #2

SCANS 100 TO 1900



RIC
10/12/87 15:12:00
SAMPLE: A-2 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

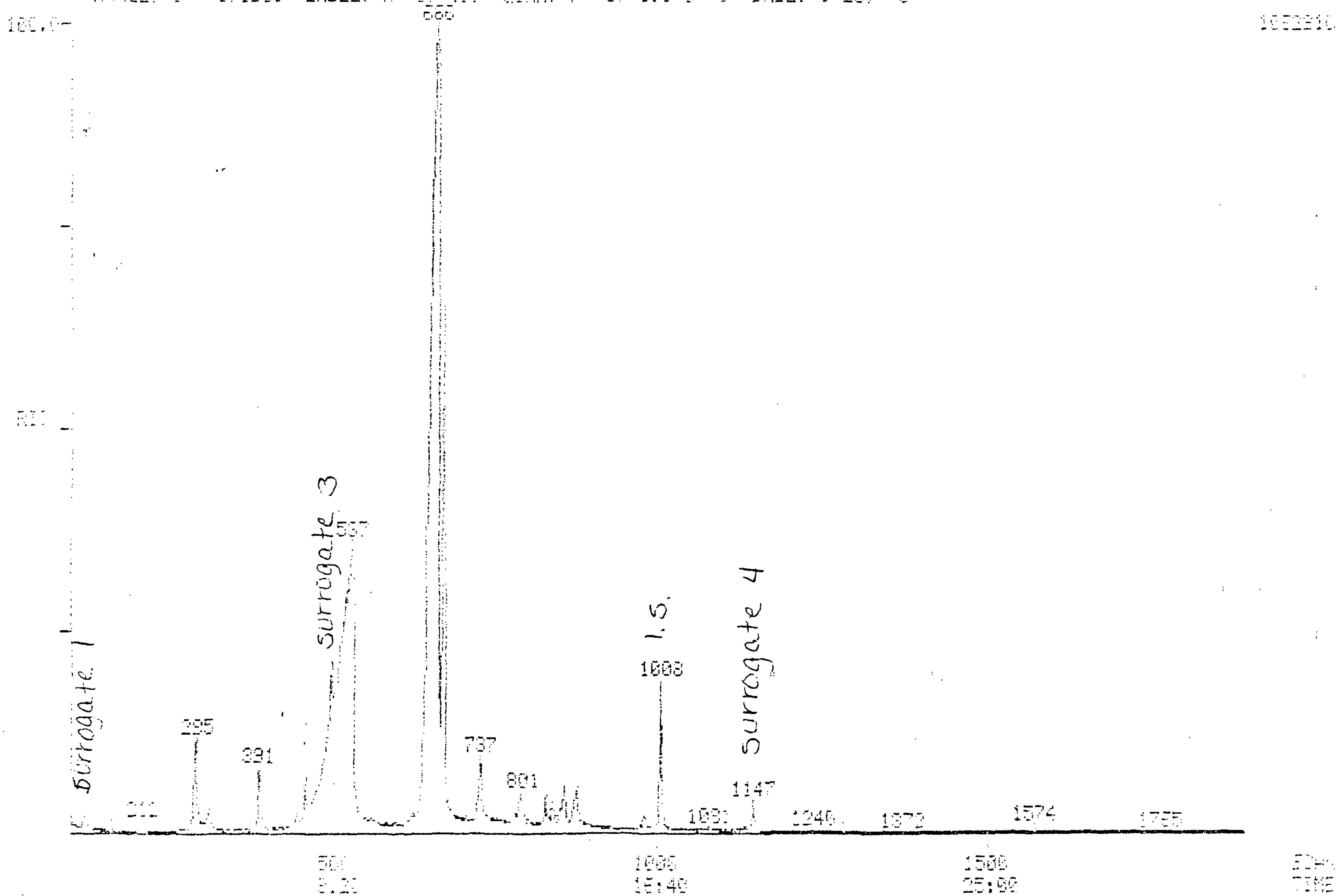
DATA: AN7092816 #1 SCANS 100 TO 1900
CALI: AN7092816 #2



RIC
10/12/87 16:04:00
SAMPLE: V-3 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

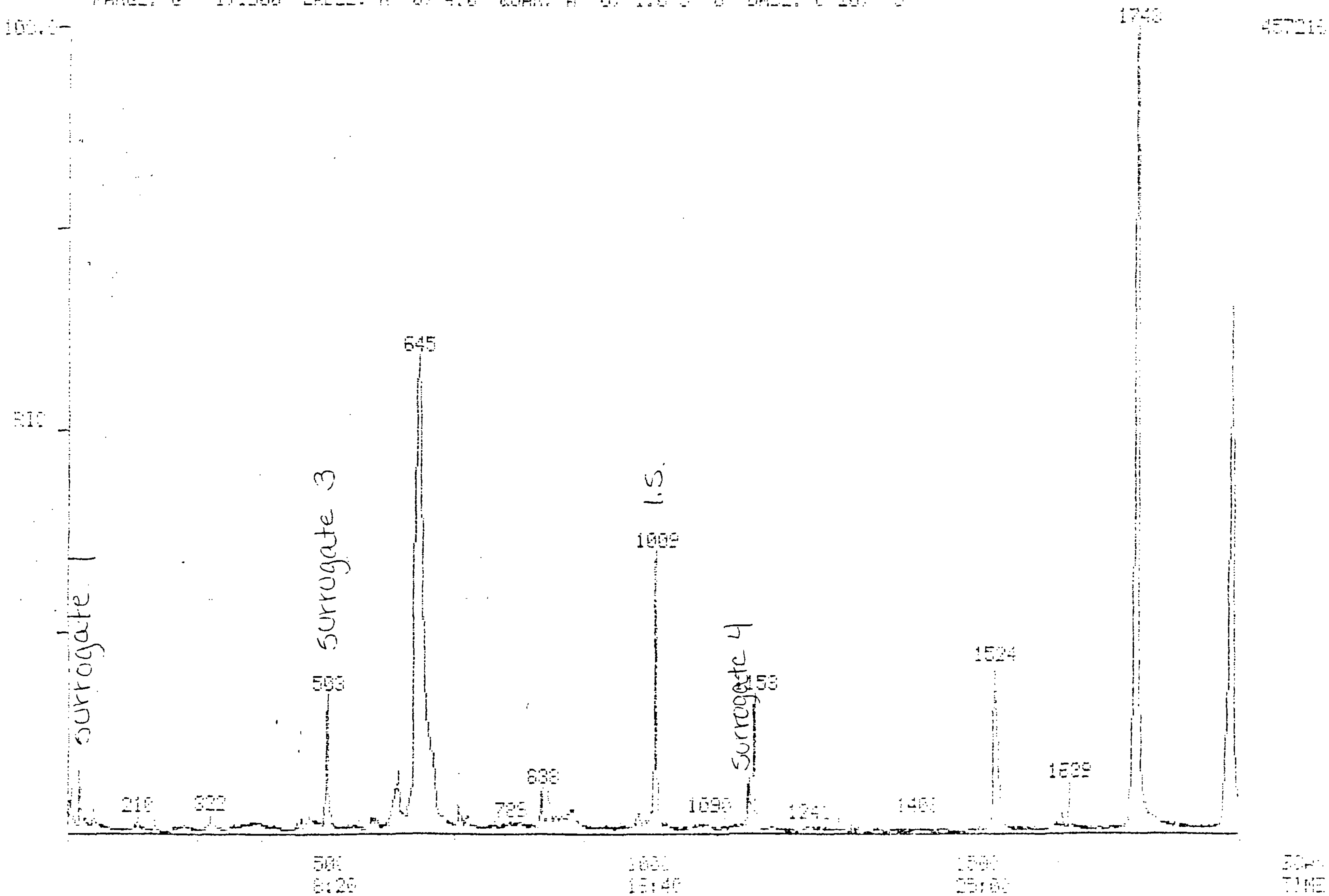
DATA: AN7052017 #1
CALI: AN7052017 #2

SCANS 100 TO 1900



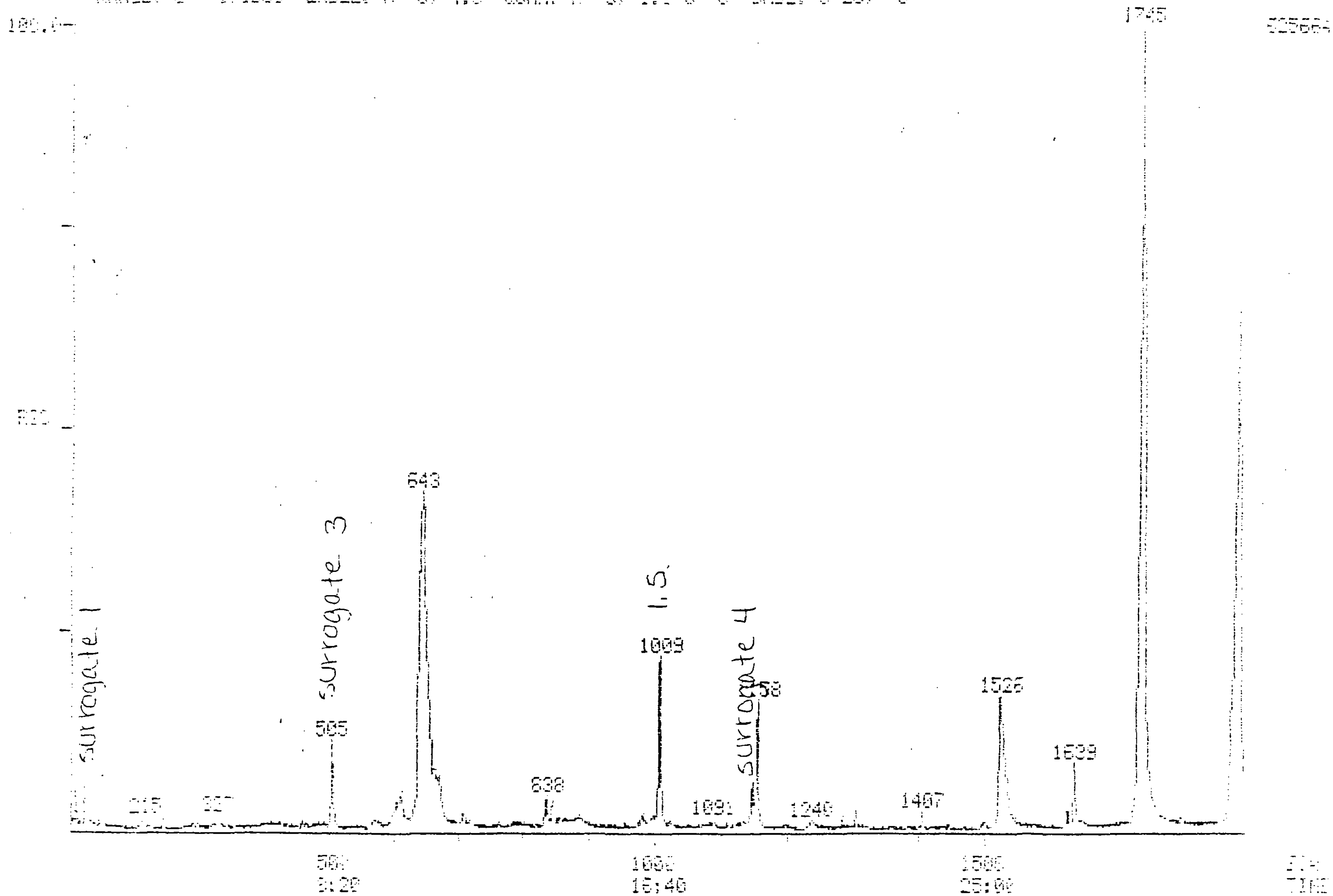
RIC
10/12/87 16:54:00
SAMPLE: U-4 (500ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: AN7092010 #1 SCANS 100 TO 1900
CALI: AN7092010 #2



RIC
10/13/87 11:25:00
SAMPLE: V-4 DUP (500ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

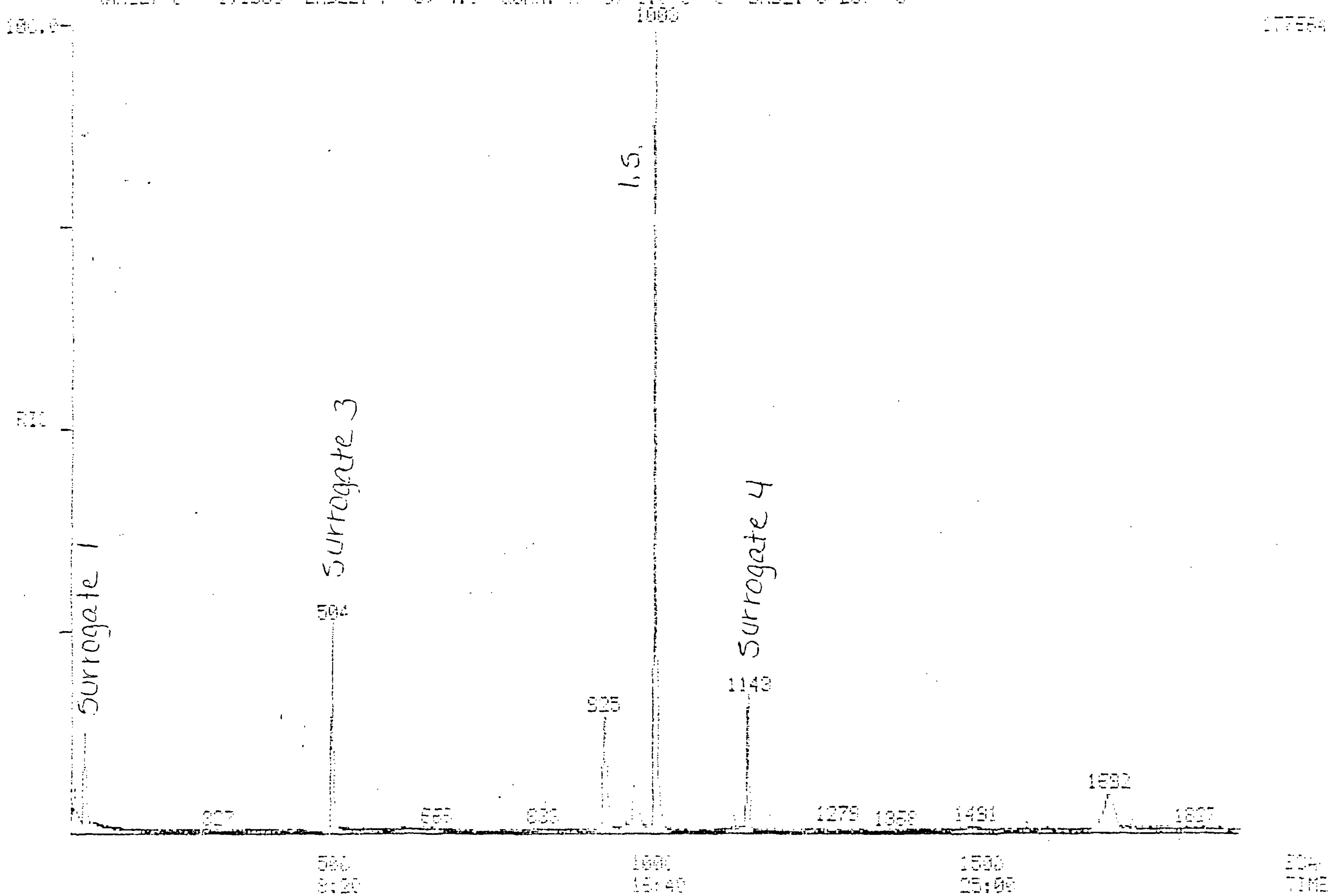
DATA: AN7092018DU #1 SCANS 100 TO 1900
CALI: AN7092018DU #2



RIC
10/12/87 18:41:00
SAMPLE: U-5 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

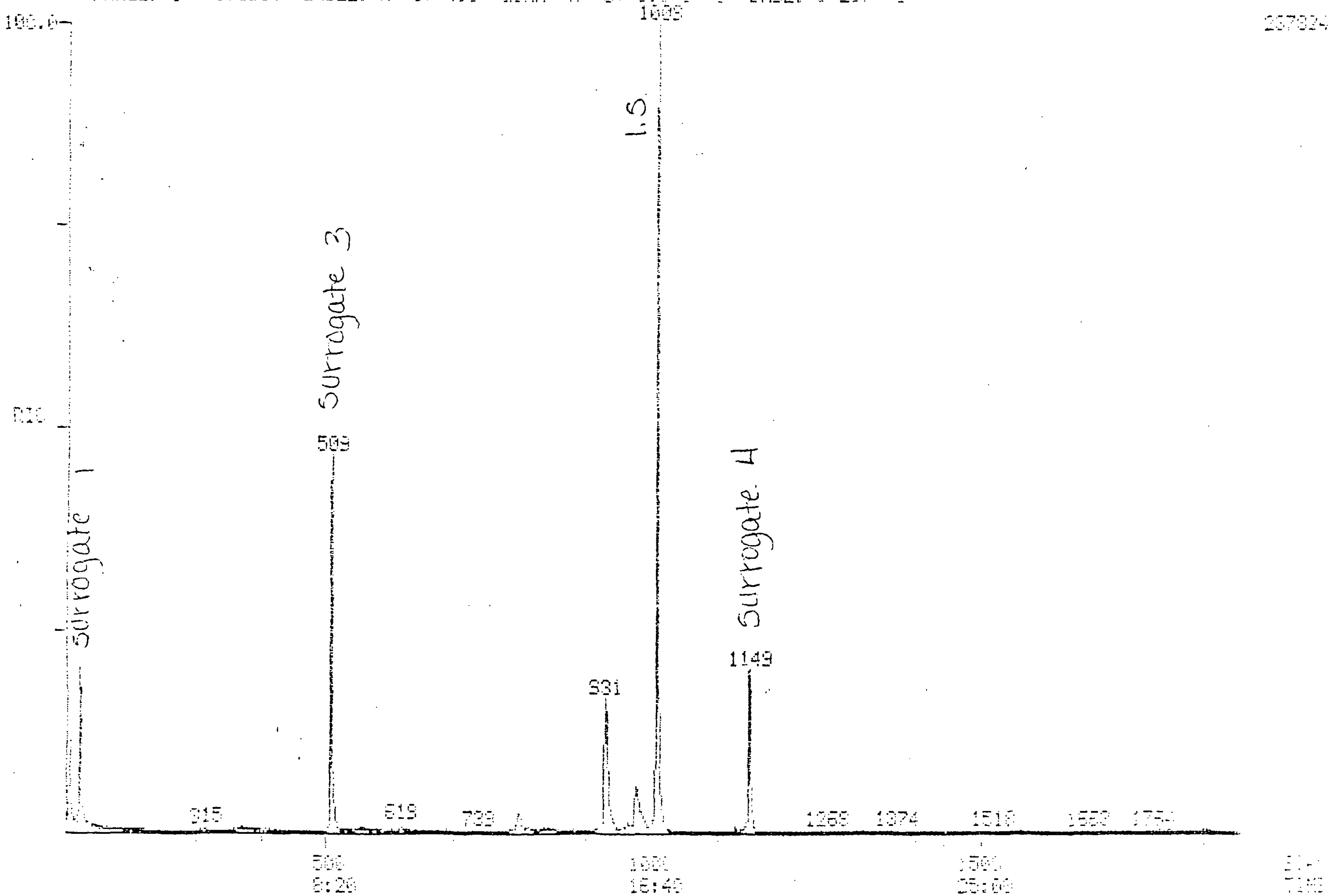
DATA: AN7082015 #1
CALI: AN7082015 #2

SCANS 100 TO 1900



RIC
10/12/87 20:12:00
SAMPLE: W-6 (1000ML/ML)
CONDI.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

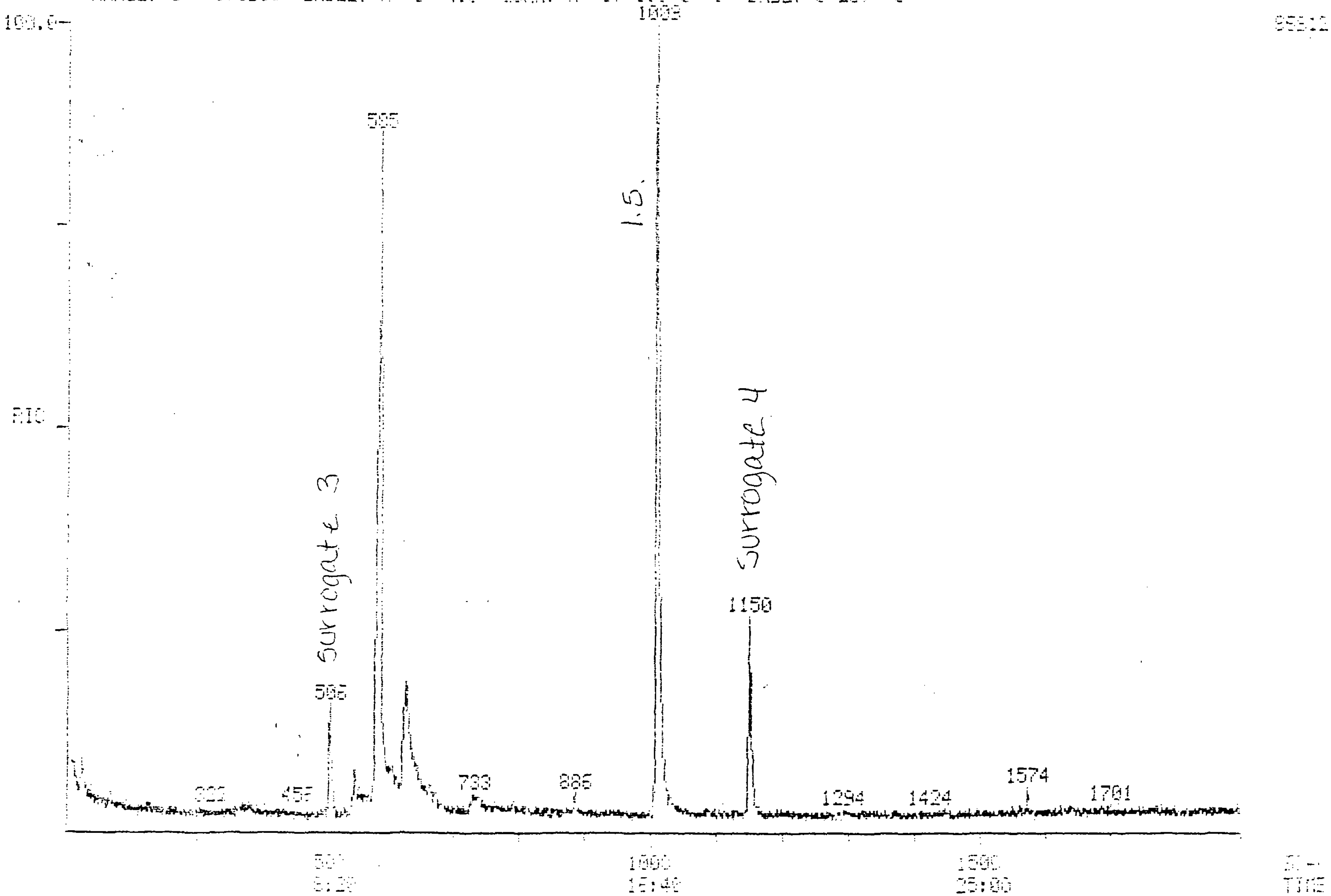
DATA: AN7092020 #1 SCANS 100 TO 1900
CALI: AN7092020 #2



RIC
10/13/87 10:31:00
SAMPLE: V-7 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: AN7092021 #1
CALI: AN7092021 #2

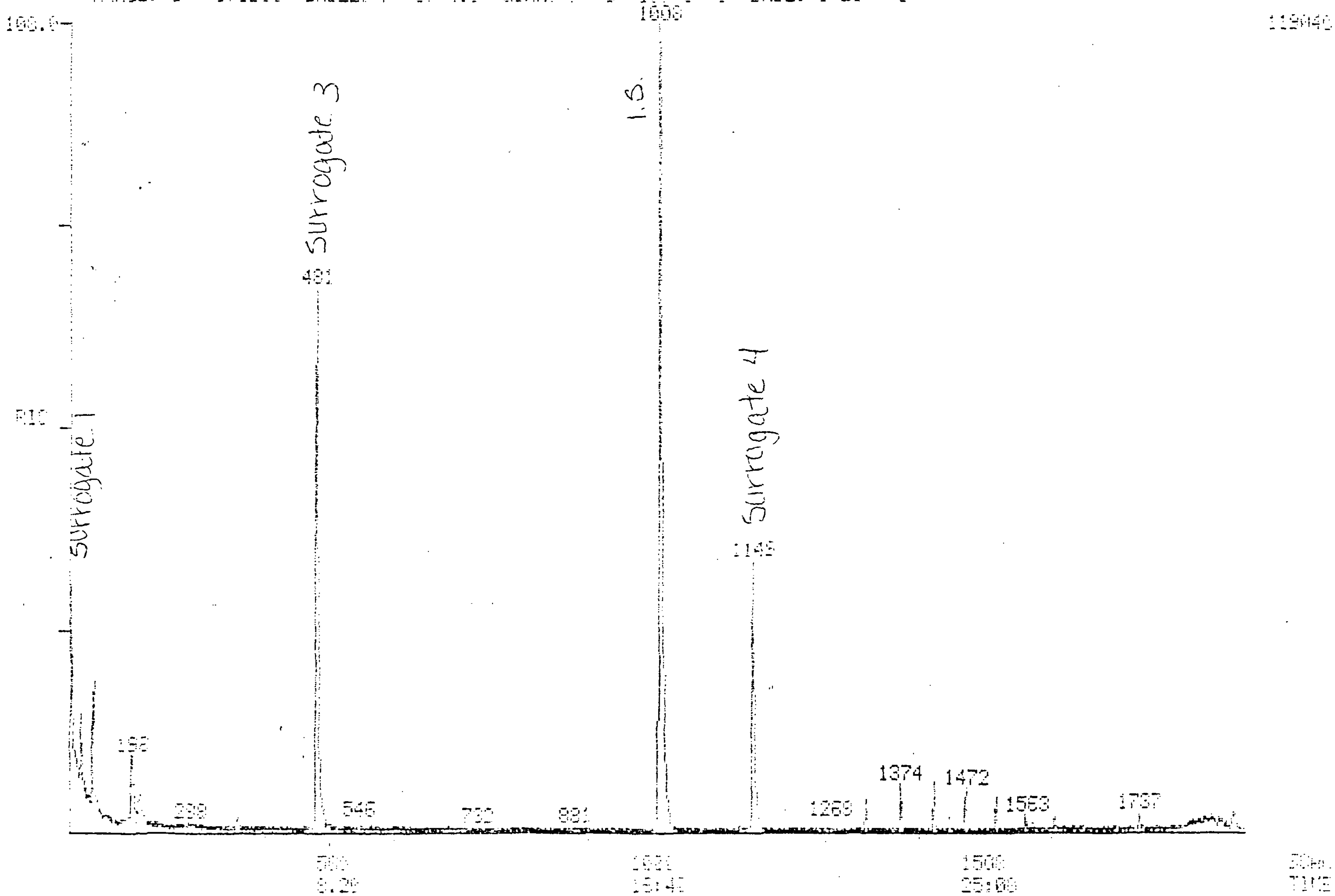
SCANS 100 TO 1900



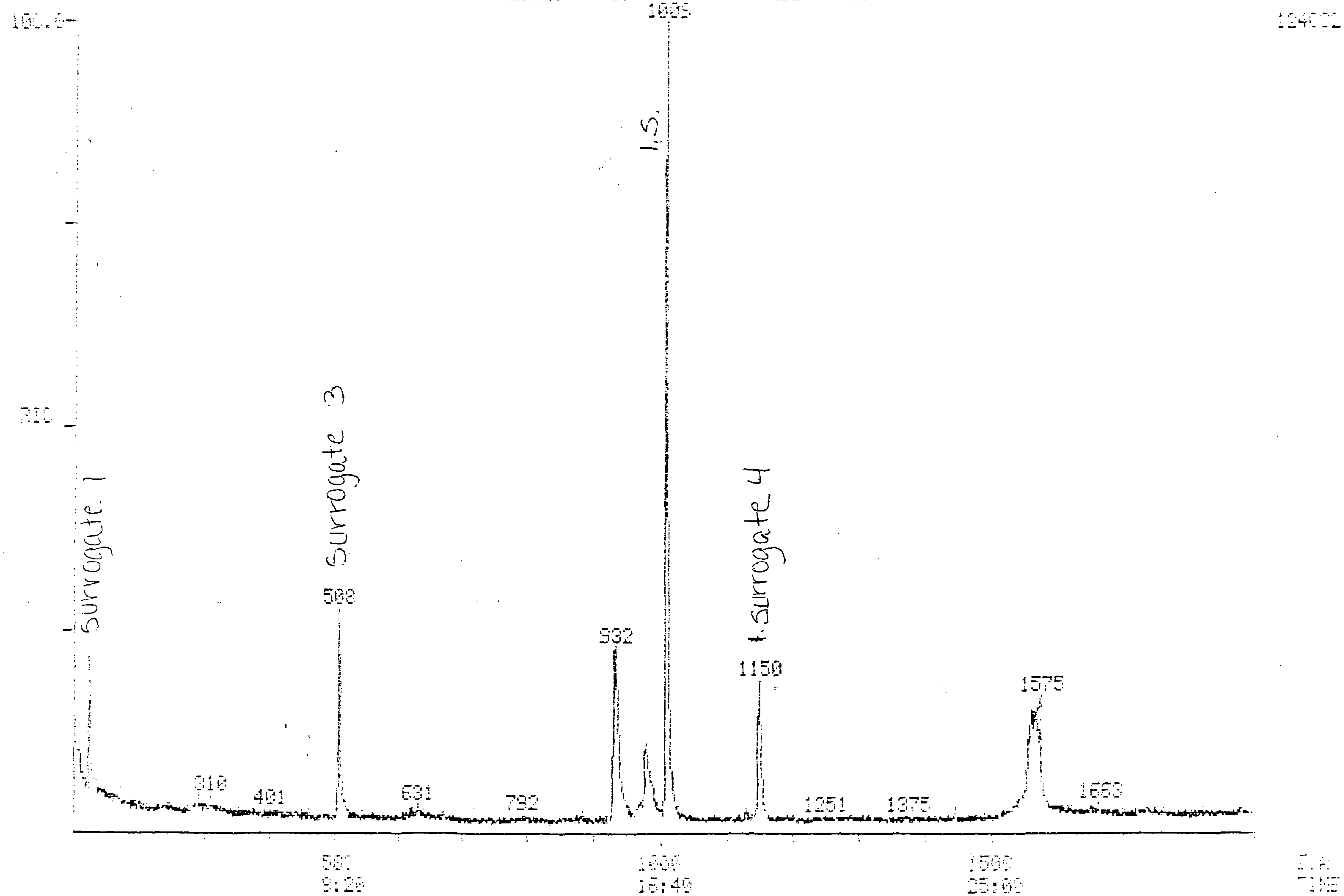
RIC
10/12/87 22:05:00
SAMPLE: H-8 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: AN7092022 #1
CALI: AN7092022 #2

SCANS 100 TO 1900



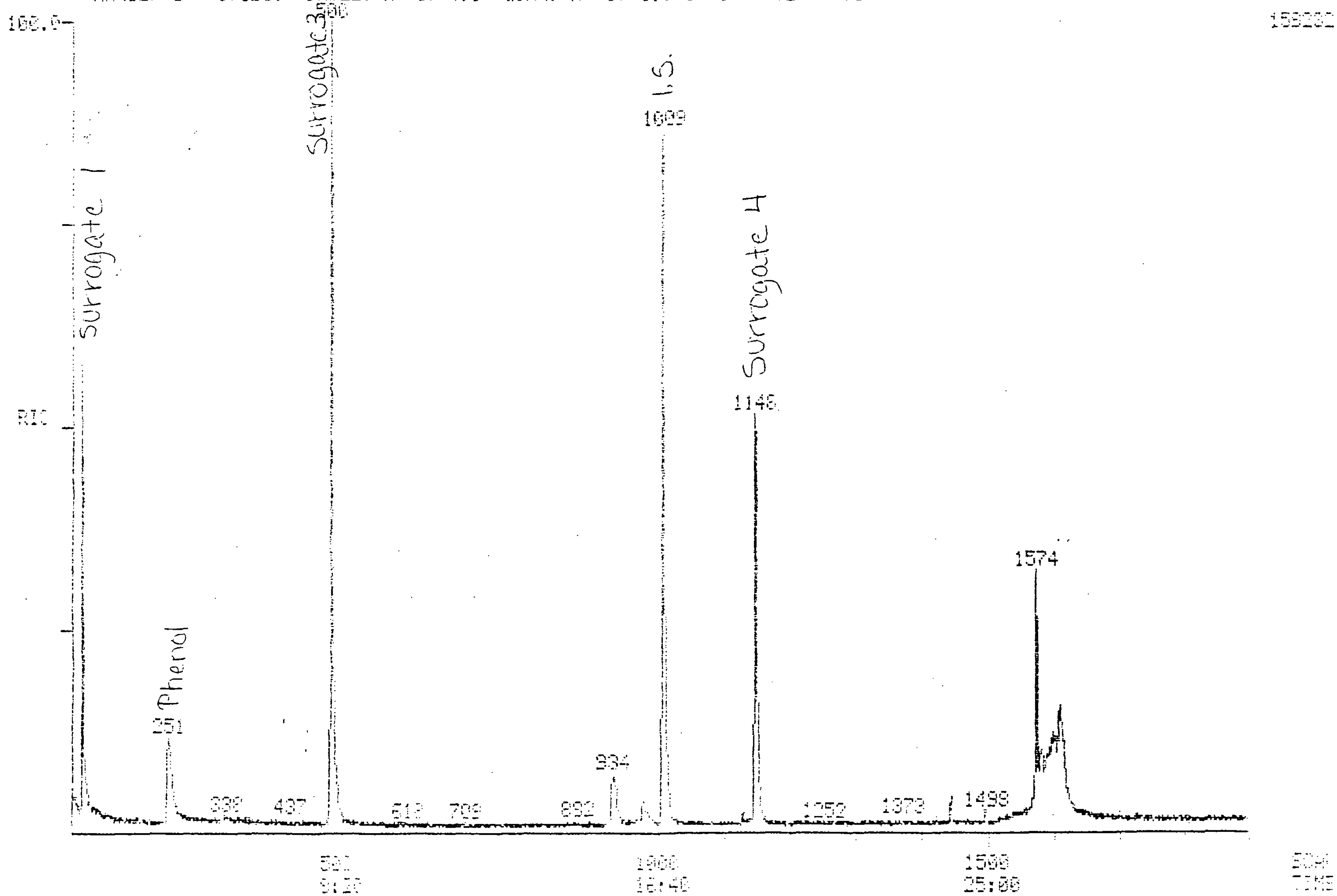
RIC DATA: AN7032023 #1 SCANS 100 TO 1900
10/13/87 12:31:00 CALI: AN7032023 #2
SAMPLE: I-2 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



RIC
10/13/87 13:25:00
SAMPLE: I-3 (1000ML/ML)
CONDS.: BNA METHOD
RANGE: G 1,1900 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: AN7092024 #1
CALI: AN7092023 #2

SCANS 100 TO 1900



SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Wahler Associates
1023 Corporation Way
Palo Alto, CA 94303
Attn: Bob Breynaert

Date Sampled: 09/25/87
Date Received: 09/28/87
Date Reported: 10/13/87
Project No. JCO-104H

Q.C. DATA REPORT

Analyst: G. Brock
Date of Analysis: 10/12/87
Method of Analysis: Common Solvents
Detection Limit: 50
Units: ppb

Sample Number	Analyte	Original Result	Duplicate Result	% Deviation
7092015	Acetone	< 50	< 50	0

Sample Number	Analyte	Sample Contribution	Spike Added	Spike Result	% Recovery
7092015	Acetone	< 50	600	460	76

SEQUOIA ANALYTICAL LABORATORY

Scot Cocamou

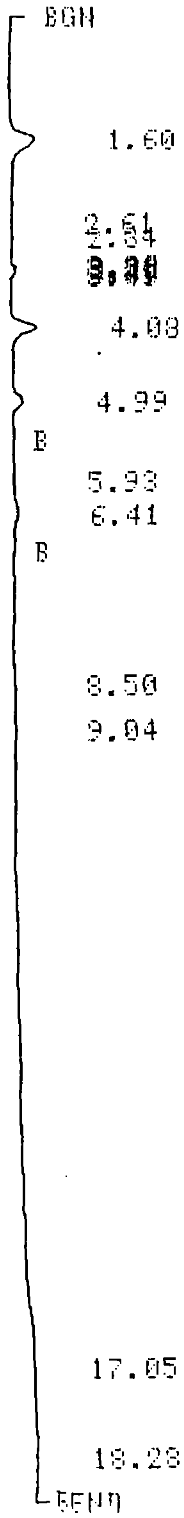
Arthur G. Burton
Laboratory Director

5mls #D.1

23:11 87/10/12

9 MODIFIED

10



RUN 10 23:11 87/10/12

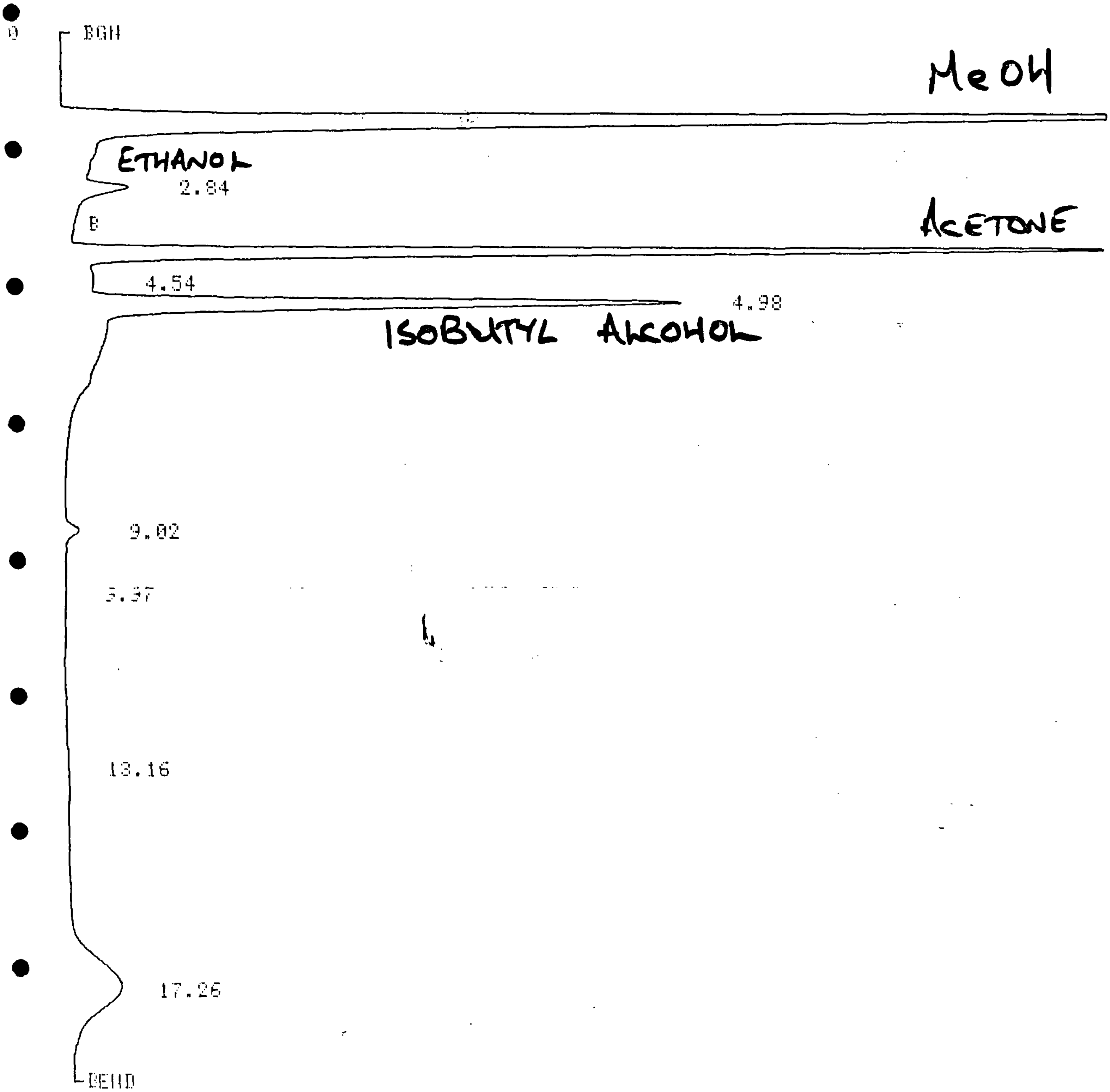
METHOD 9 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
1.60	1.6496	T	26.5006
2.61	0.0658	T	1.0579

22:34 87/10/12

1) # STD.

MODIFIED



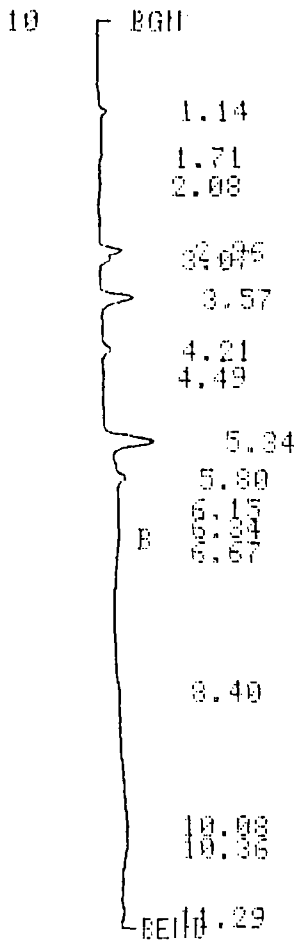
[illegible]	[illegible]	V	[illegible]
6.13	1.1615	V	3.1755
8.43	0.3685	T	1.0075
9.55	0.9073	T	2.4806
10.06	0.3478	T	0.9509
10.81	0.3758		1.0276

11 PEAKS > AREA/HT REJECT

Smb # 7092015

5 20:25 87/10/12

9 MODIFIED



RUN 5 20:25 87/10/12

METHOD 9 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
1.14	0.5707	T	6.6703
1.71	0.3744	T	4.3762
2.09	0.0807	V	0.9440
2.96	0.5480	T	6.4041
3.07	0.2299	V	2.6875
3.57	0.9544	T	11.1534
4.21	0.2914	T	3.4059
[illegible]	0.6713	V	[illegible]
5.34	1.3629	T	15.9276
5.80	0.7564	T	8.8400

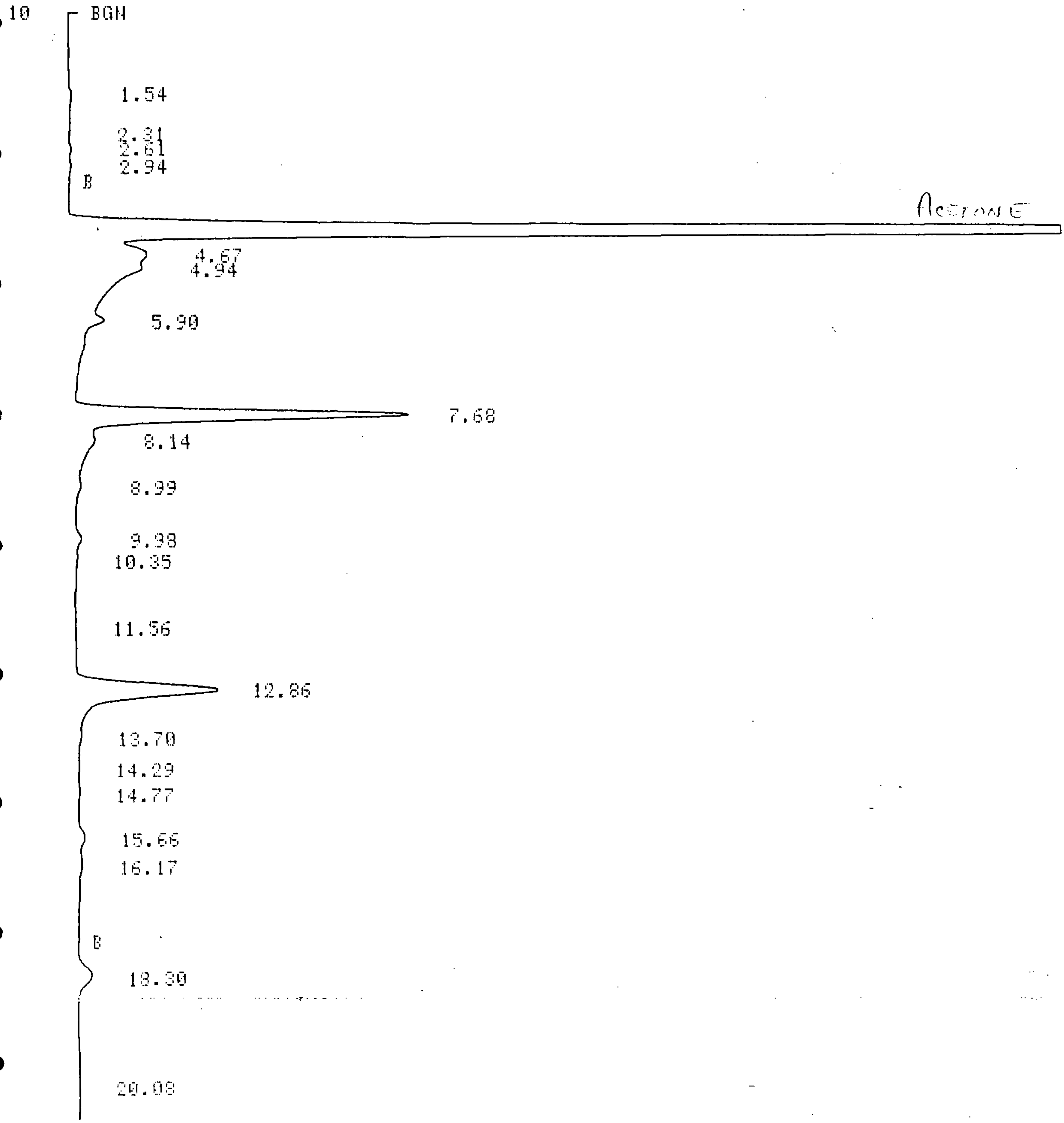
17.29 0.1844 V 4.6996
18.26 0.1156 2.9453

9 PEAKS > AREA/HT REJECT

1ml # 7092016.

? 9:25 87/10/12

9 MODIFIED

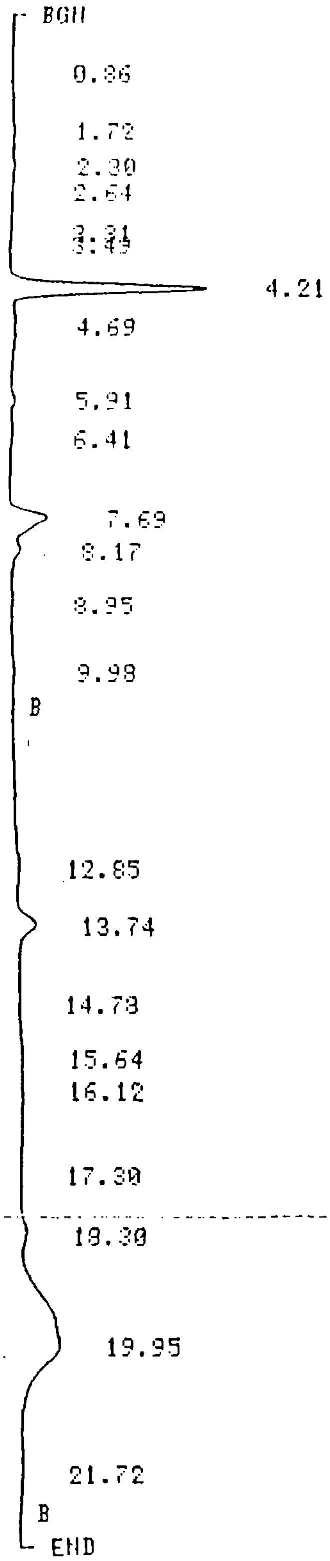


N 14 1:11 87/10/13

ETHOD 9 MODIFIED

5 ml 7092017

32 C 10

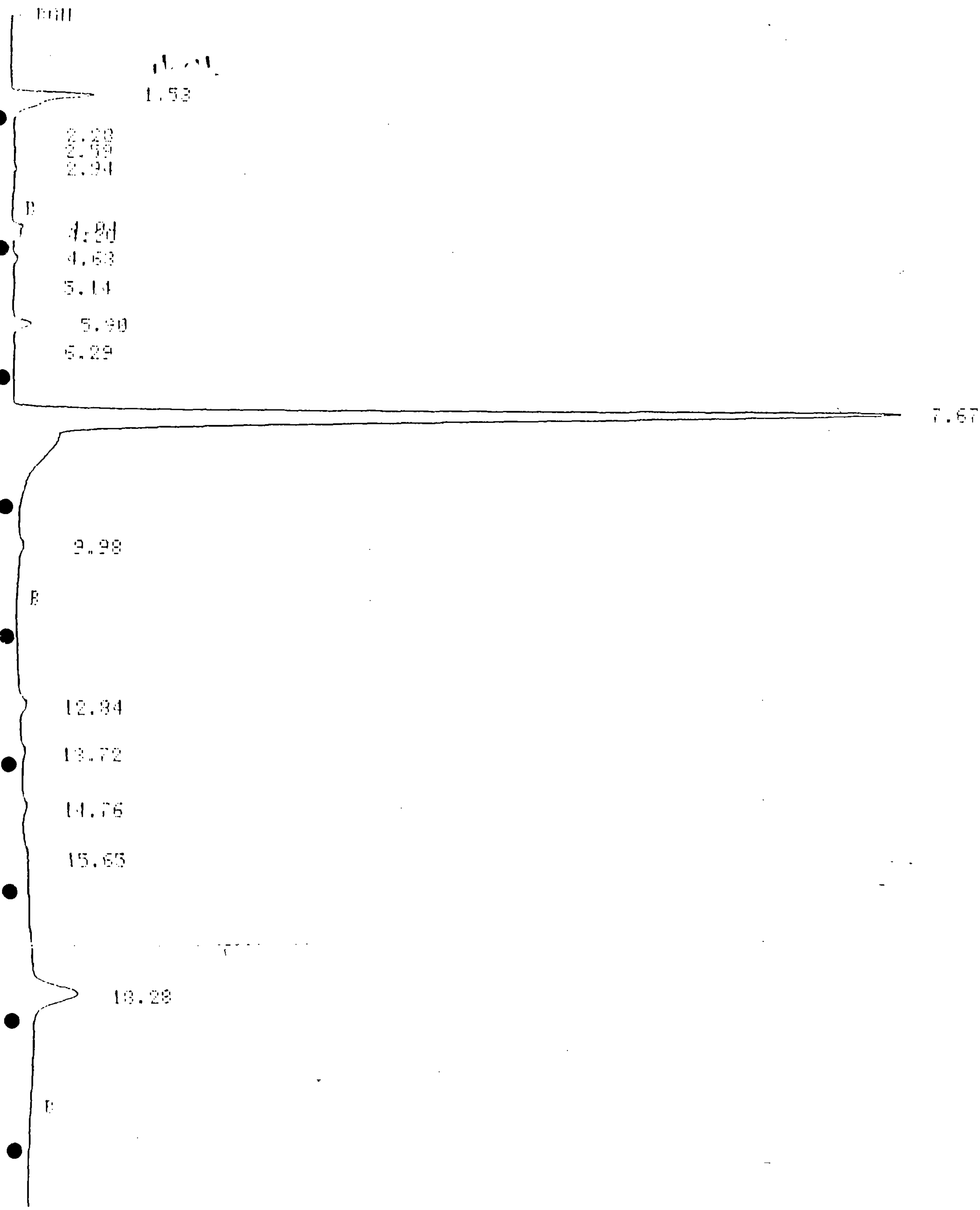


RUN 14 1:11 87/10/13

METHOD 9 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
0.86	0.0889	T	0.2458
1.72	0.2885	T	0.7978
2.30	0.2929	T	0.8102
2.64	0.1578	T	0.4364
3.31	0.2409	T	0.6664

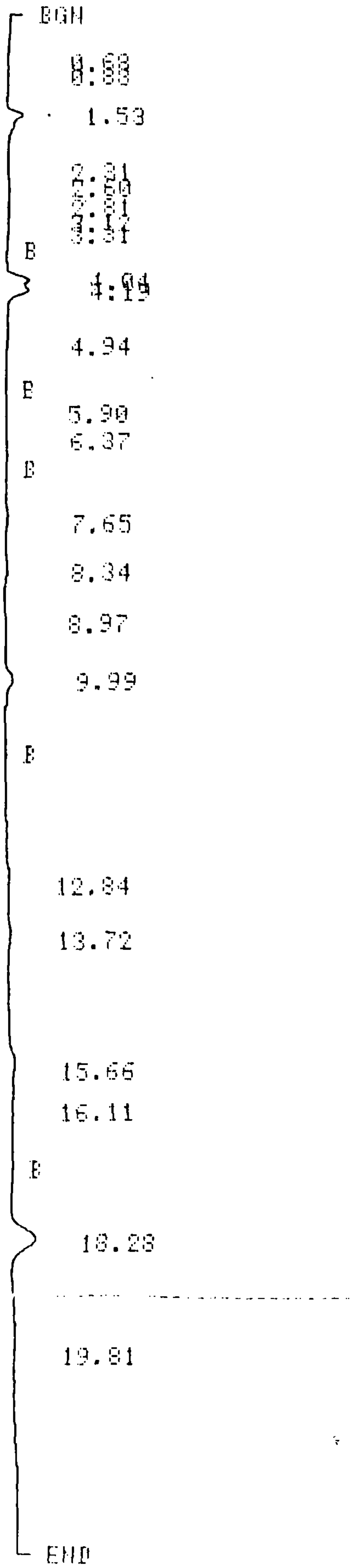
5 mls. 7092018



2:41 87/10/13

5 ml 7092019

MODIFIED

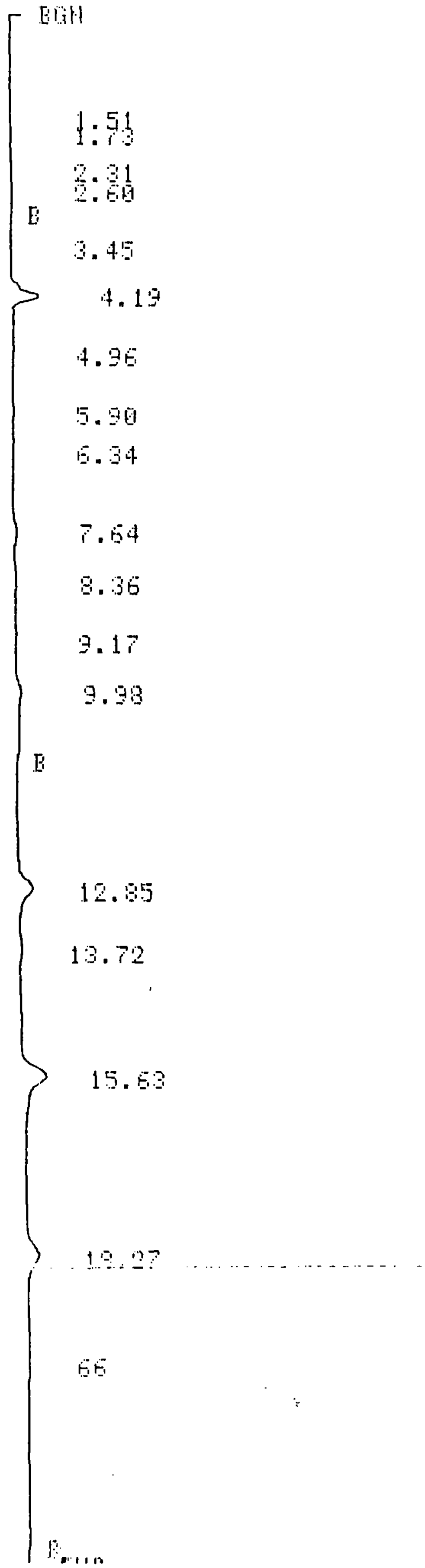


5 ml 7092020

17 3:26 87/10/13

D 9 MODIFIED

10

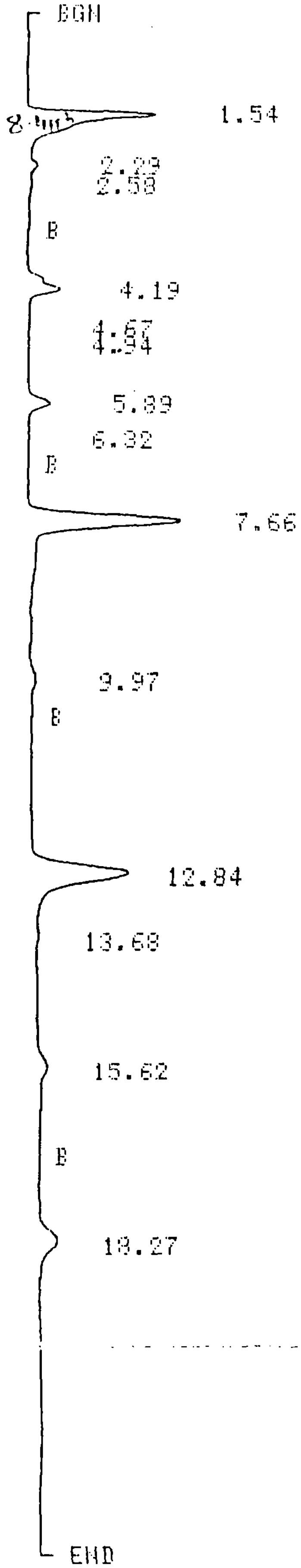


4:11 87/10/13

5 ml 7092021

9 MODIFIED

10

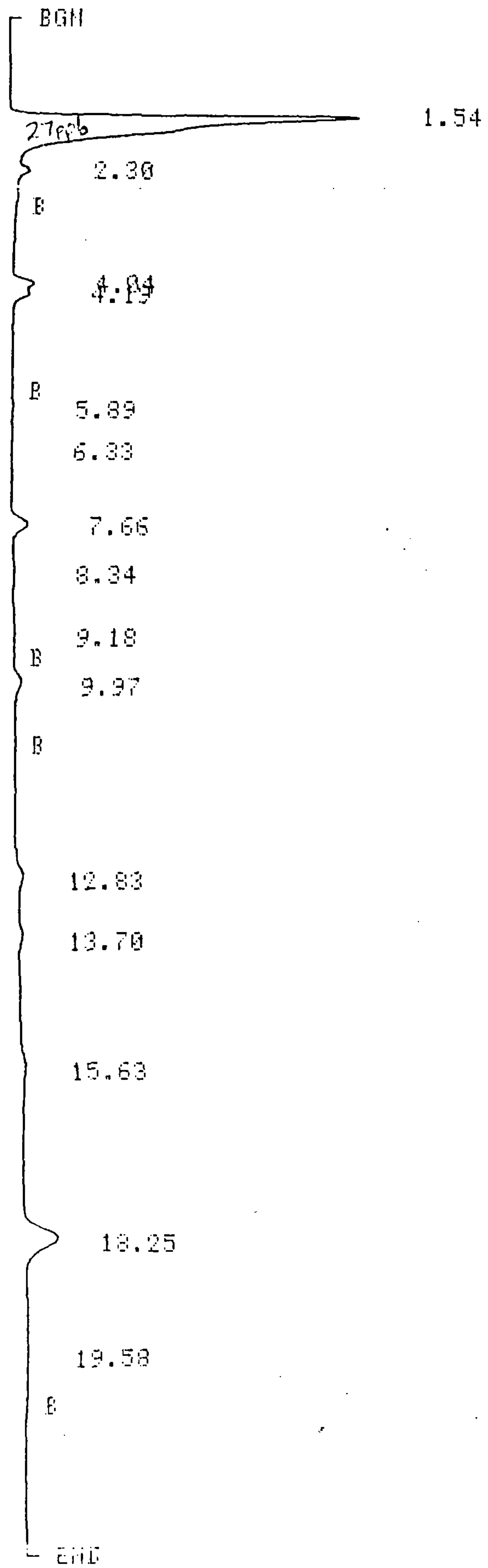


9 4:55 87/10/13

5 ml 7092022

9 MODIFIED

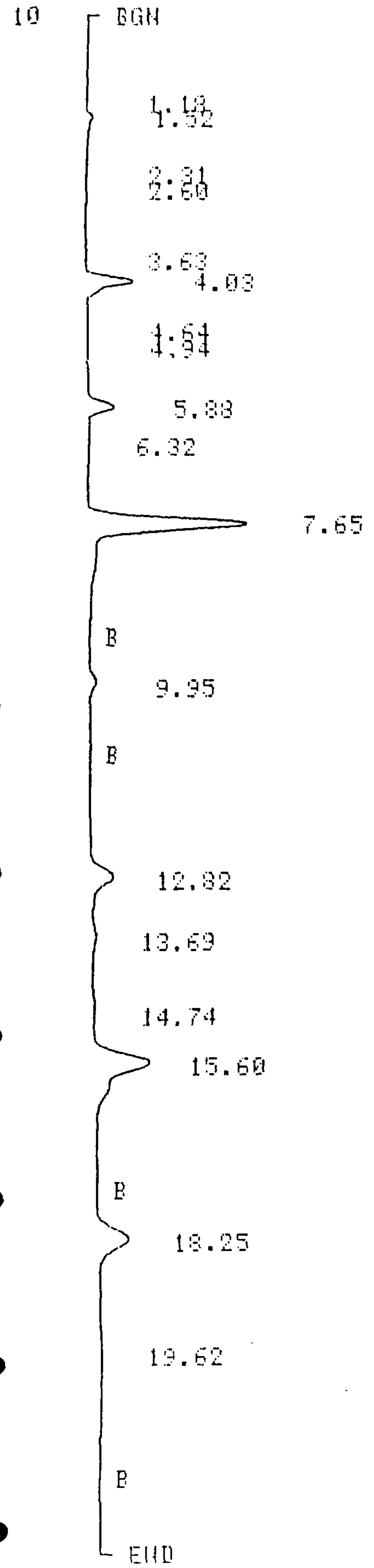
10



5 ml 7092023

0 5:40 87/10/13

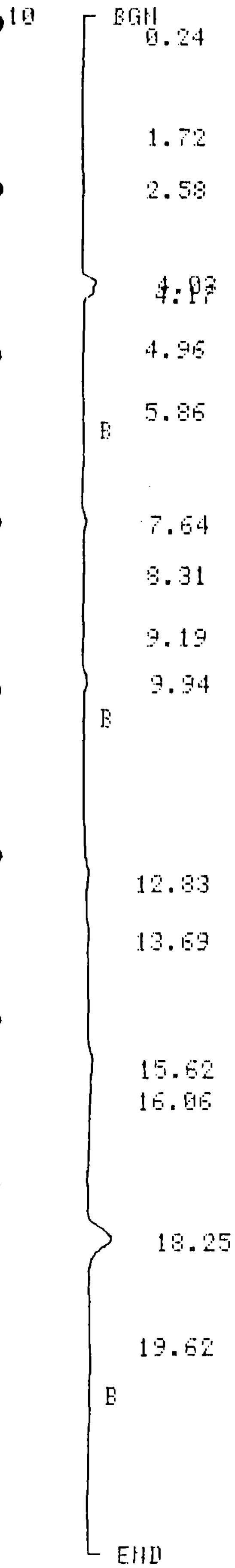
9 MODIFIED



5 ml 7092024

6:25 87/10/13

9 MODIFIED

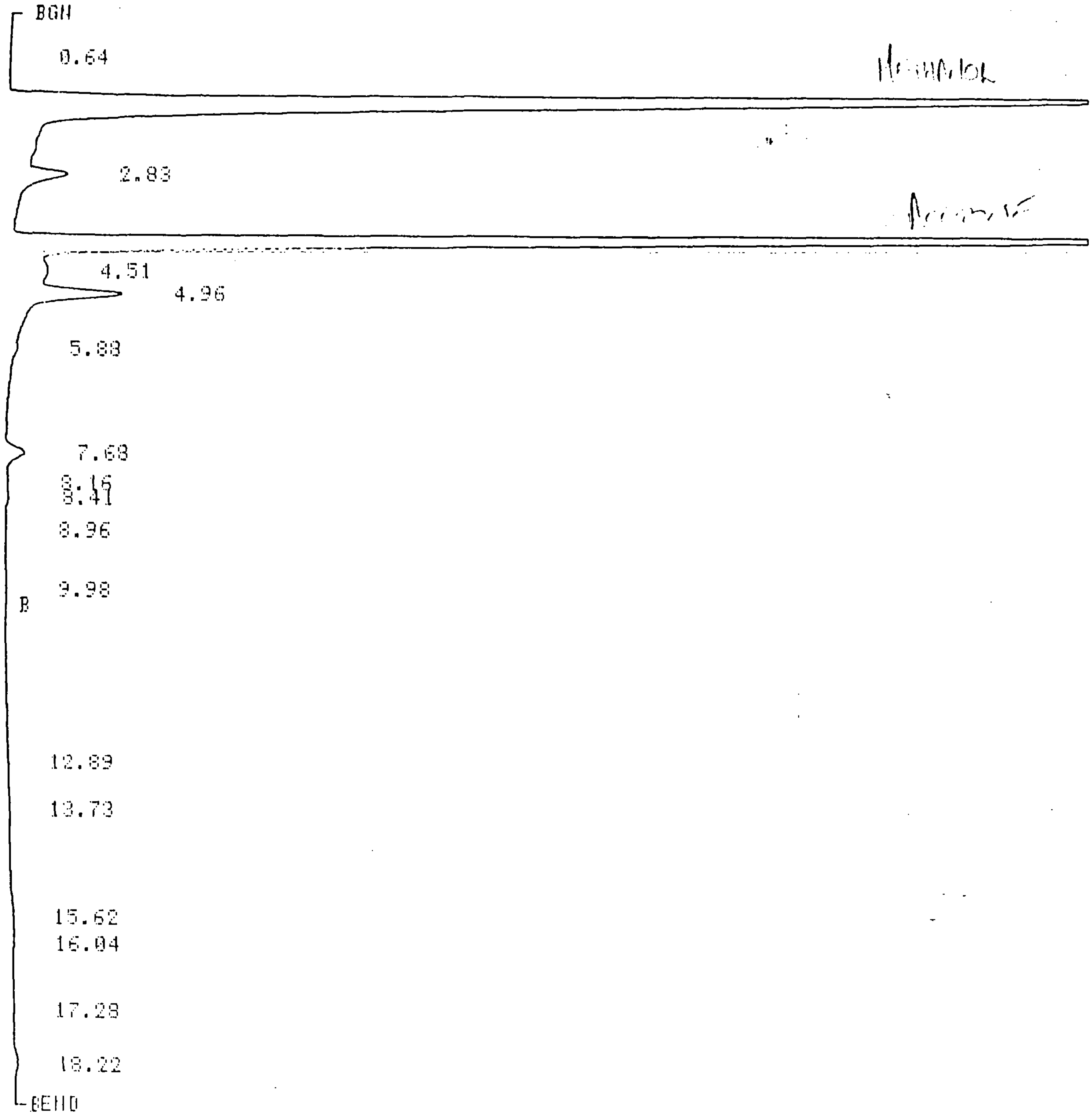


13 PEAKS > AREA/HT REJECT

5mls #7092015 + spike.

23:35 87/10/12

MODIFIED



N 11 23:35 87/10/12

THOD 9 MODIFIED CALCULATION: %

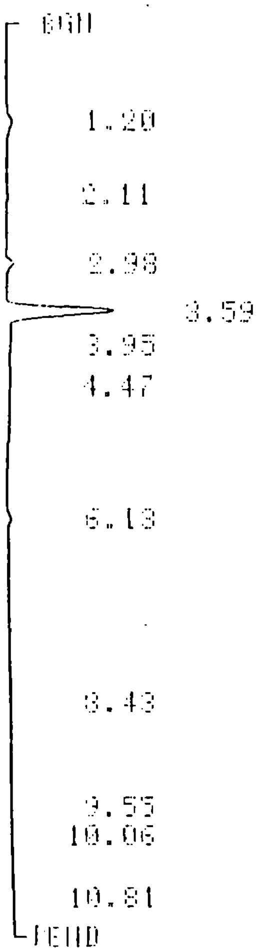
RT	AREA	BC	AREA %
0.49	0.0196	V	0.0010
1.20	82.5126	T	4.4188
1.75	5.7054	T	0.3055
2.11	6.4489	T	0.3453
2.98	69.4965	T	3.7218
3.60	1286.2490	T	68.8837
3.94	244.9159	T	13.1162
6.14	156.5871	T	8.3858
8.43	11.4985	T	0.6157
8.90	1.9168		0.1026
10.11	1.8559	V	0.0993
11.29	0.0674		0.0036

12 PEAKS > AREA/HT REJECT

Smls # 7092015

19:53 87/10/12

MODIFIED



RUN 4 19:53 87/10/12

METHOD 9 MODIFIED CALCULATION: %

RT	AREA	BC	AREA %
1.20	2.0220	T	5.5283
2.11	0.3715	V	1.0159

APPENDIX E

0000122

WA Project Number: JCO-104H

Page 1 of 2

Wahler Associates

Field Sample Chain of Custody Record

Source of Sample(s) Mountain View

Address

Phone ( )

Report to (1) Robert Braynaert

Collector Paul Schmitd

Affiliation Wahler Assoc.

Address 1023 Corporation Way
Palo Alto CA 94056

Phone (415) 968-6250

Sample Information

Lab No.	Field No.	Date	Time	Type (2)	Depth	Remarks (Suspected Contaminants, Field Conditions, etc.)
		/ /				See Attached
		/ /				analysis request form
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				

Chain of Possession

	Relinquished by (Signature and affiliation)	Date	Time	Received by (3) (Signature and affiliation)	Date	Time
1.	[signature]	8/20/87	2:30	Pat Burke	8/20/87	2:3
2.		/ /			/ /	
3.		/ /			/ /	

(1) There is a separate Request for Analysis form that should be filled out by the collect and given to the Laboratory when samples are delivered.
(2) e.g. water, sludge, soil, etc.
(3) If any samples are not intact at time of transfer, please describe on the back of this form.

0000122

Wahler Associates

Geotechnical and Water Resources Engineering

ANALYSIS REQUEST FORM

Page ____ of ____

Sequoia Date Sample Shipped 8-20-87

Wahler Associates will indicate a contact person and phone number which the Lab staff can use to obtain or verify the appropriate analytical requirements.

Your Sample I.D.	Matrix	Container	Analysis Requested
JCO-817-TAP	H_2O	2 VOA	EPA-601
JCO-817-tank	H_2O	2 VOA	EPA-601

Comments written turnaround in 10-15 days. Last possible day for results is September 11, 1987. Please include all QA/QC data plus chromatograms per request of RWQCB.

Contact Person Bob Breyngelt (415) 968-6250
Name Telephone

Lab Project Manager (if known) Scott Cocanour

1023 Corporation Way, P.O. Box 10023, Palo Alto, California 94303 • Telephone Number (415) 968-6250
Telex Number 4998623

0000122

WA Project Number: JCO-104H

Page 1 of 2

Wahler Associates

Field Sample Chain of Custody Record

Source of Sample(s) Mountainview

Address

Phone (415) 968-6250

Report to (1) Robert Breynaert

Collector Paul Schmidt ok @HWJ

Affiliation Wahler Associates

Address PO Box 10023

Palo Alto CA 94303

Phone (415) 968-6250

Sample Information

Lab No.	Field No.	Date	Time	Type (2)	Depth	Remarks (Suspected Contaminants, Field Conditions, etc.)
		/ /				See Attached
		/ /				Analysis Request Form
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				

Chain of Possession

	Relinquished by (Signature and affiliation)	Date	Time	Received by (3) (Signature and affiliation)	Date	Time
1.	Charles H. White	8/31/87	2:14	Laura Marsh	8/31/87	14:14
2.		/ /			/ /	
3.		/ /			/ /	

(1) There is a separate Request for Analysis form that should be filled out by the collector and given to the Laboratory when samples are delivered.

(2) e.g. water, sludge, soil, etc.

(3) If any samples are not intact at time of transfer, please describe on the back of this form.

Wahler Associates
Geotechnical and Water Resources Engineering

0000122

ANALYSIS REQUEST FORM

Anametrics Date Sample Shipped 8-27-87

Wahler Associates will indicate a contact person and phone number which the Lab staff can use to obtain or verify the appropriate analytical requirements.

Your Sample I.D.	Matrix	Container	Analysis Requested
U-2	H_2O	VOA	EPA 601/602 plus MEK and Xylenes

Comments 10-15 day turnaround please supply Lab QA/QC documentation plus chromatograms for both analyses. - There is likely to be Methylene chloride in sample

Contact Person Bob Breynaert or Paul Schmidt (415) 968-6250
Name Telephone

Lab Project Manager (if known)

1023 Corporation Way, P.O. Box 10023, Palo Alto, California 94303 • Telephone Number (415) 968-6250
Telex Number 4998623

0000122

Wahler Associates

WA Project Number: JCO-104H

Page 1 of 2

Field Sample Chain of Custody Record

Source of Sample(s) Mountain View, CA

Address

Phone ( )

Report to (1) Bob Breynaert

Collector Paul Schmidt

Affiliation Wahler Assoc.

Address PO Box 10023

Palo Alto CA 94303

Phone (415) 968-6250

Sample Information

Lab No.	Field No.	Date	Time	Type (2)	Depth	Remarks (Suspected Contaminants, Field Conditions, etc.)
		/ /				See attached
		/ /				analysis request form.
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				

Chain of Possession

	Relinquished by (Signature and affiliation)	Date	Time	Received by (3) (Signature and affiliation)	Date	Time
1.	[signature]	9/25/87	4:52p	[signature], Anametrix	9/28/87	4:[illegible]
2.		/ /			/ /	
3.		/ /			/ /	

(1) There is a separate Request for Analysis form that should be filled out by the collector and given to the Laboratory when samples are delivered.
(2) e.g. water, sludge, soil, etc.
(3) If any samples are not intact at time of transfer, please describe on the back of this form.

F. H.
9/25/8

0000122

Wahler Associates

Geotechnical and Water Resources Engineering

ANALYSIS REQUEST FORM

ANRESCO Date Sample Shipped 9-25-87

Wahler Associates will indicate a contact person and phone number which the Lab staff can use to obtain or verify the appropriate analytical requirements.

Your Sample I.D.	Matrix	Container	Analysis Requested
V-2	H_2O	(2) VOA	EPA 601/602 plus MEK, Xylenes
V-4	H_2O	(2) VOA	EPA 601/602 plus MEK and Xylenes
Field Blank (9/24)	H_2O	(1) VOA	EPA 601/602 plus MEK and Xylenes
Field Blank (9/25)	H_2O	(1) VOA	EPA 601/602 plus MEK and Xylenes
Method blank	H_2O	(1) VOA	EPA 601/602 plus MEK and Xylenes

Comments Results due by Friday October 9, 1987. Please submit: dilution factors; detection limits based on limits of quantification; calculated recoveries of internal standards and/or surrogates. Also state whether H_2O samples were filtered before or during sample analysis. Submit concentrations of blanks analyzed before and during sample analysis. Please call if you have any questions regarding this request.

Contact Person Bob Breynaert (415) 968-6250
Name Telephone

Lab Project Manager (if known)

WA Project Number: JCO-1041

Page 1 of 2

Wahler Associates

Field Sample Chain of Custody Record

Source of Sample(s) Mountain View

Address

Phone ( )

Report to (1)

Collector Paul Schmidt ok

Affiliation Wahler Associates

Address PO BOX 10023 Palo Alto, CA 9430

Phone (415) 968-6250

Sample Information

Lab No.	Field No.	Date	Time	Type (2)	Depth	Remarks (Suspected Contaminants, Field Conditions, etc.)
		/ /				See Attached
		/ /				Analysis Request Sheet
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				

Chain of Possession

	Relinquished by (Signature and affiliation)	Date	Time	Received by (3) (Signature and affiliation)	Date	Time
1.	Paul Schmidt	8/3/87	10:23	[signature]	8/31/87	10:23
2.		/ /			/ /	
3.		/ /			/ /	

(1) There is a separate Request for Analysis form that should be filled out by the collect and given to the Laboratory when samples are delivered.
(2) e.g. water, sludge, soil, etc.
(3) If any samples are not intact at time of transfer, please describe on the back of this form.

0000122

Wahler Associates

Geotechnical and Water Resources Engineering

ANALYSIS REQUEST FORM

Sequoia Date Sample Shipped 8-28-87

Wahler Associates will indicate a contact person and phone number which the Lab staff can use to obtain or verify the appropriate analytical requirements.

Your Sample I.D.	Matrix	Container	Analysis Requested
(1) U-1	H_2O	VOA	(1) EPA 601/602 plus MEK and xylene
U-2			
U-3	H_2O	VOA	(2) Total Hydrocarbons as Paint Thinner
U-4			
U-5	H_2O	VOA	(3) Alcohols/Acetone
U-6			
U-7 *	H_2O	1l Jar	(4) EPA 604 - phenols
I-1			
(2) I-2	H_2O	VOA	EPA 624 openscan
(3) I-3	H_2O	VOA	EPA 624 openscan
(4) V-2	H_2O	VOA	EPA-601/602 - Perform duplicate run on sample (we will pay for it)
(5) 2 Field Blank (8-27/8-28)	H_2O	2 VOA's	EPA 601/602
(6) 2 Method Blank (8-27/8-28)	H_2O	2 VOA's	EPA 601/602

Comments Please include all laboratory QA/QC documentation plus chromatograms for all analyses - normal 10-15 day turnaround * Note V-7 604-phenol JAR was labeled preserved (H_2SO_4)

Contact Person Bob Breymont (415) 968-6250
Name Paul Schmidt Telephone

Lab Project Manager (if known) Scott Corcoran

0000122

WA Project Number: JCO-104H

Page 1 of 2

Wahler Associates

Field Sample Chain of Custody Record

Source of Sample(s) Mountain View, CA

Address

Phone ( )

Report to (1) Bob Breynaert

Collector Paul Schmidt

Affiliation Wahler Assoc.

Address PO Box 10023
Palo Alto CA 94303

Phone (415) 868-6250

Sample Information

Lab No.	Field No.	Date	Time	Type (2)	Depth	Remarks (Suspected Contaminants, Field Conditions, etc.)
		/ /				See attached
		/ /				analysis request form.
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				
		/ /				

Chain of Possession

	Relinquished by (Signature and affiliation)	Date	Time	Received by (3) (Signature and affiliation)	Date	Time
1.	[signature]	9/28/87	934	Carolyn Anderson	9/28/87	9:34
2.	Susie Schneider	9/28/87	9:40	Frank [signature] Sequoia Lab	9/28/87	
3.		/ /			/ /	

(1) There is a separate Request for Analysis form that should be filled out by the collector and given to the Laboratory when samples are delivered.
(2) e.g. water, sludge, soil, etc.
(3) If any samples are not intact at time of transfer, please describe on the back of this form.

F.H 9/25/87

0000122

Wahler Associates

Geotechnical and Water Resources Engineering

ANALYSIS REQUEST FORM

Page 2 of 2

Sequoia Date Sample Shipped 9-25-87

Wahler Associates will indicate a contact person and phone number which the Lab staff can use to obtain or verify the appropriate analytical requirements.

Your Sample I.D.	Matrix	Container	Analysis Requested
V-1			
V-2			1) EPA 601/602 plus MEK and Xylenes
V-3			2) Total Hydrocarbons as Paint Thinner
V-4			3) Alcohols/Acetone
V-5	H_2O	(2) VOA	4) EPA-604 Phenols.
V-6			
V-7			
I-1			
I-2			
I-3			
V-4	H_2O	2 VOA	EPA 601/602 plus MEK + Xylenes*
			* note - perform duplicate run
			on sample from well V-4
			we will pay for it.

Comments Please include all QA/QC data as performed previously. WE NEED ALL RESULTS IN WRITTEN FORM PLUS QA/QC DOCUMENTATION. BY OCTOBER 15, 1987 AT THE ABSOLUTE LATEST.

Contact Person Bob Braynaert (415) 968-6250
Name Telephone

Lab Project Manager (if known) Scott Cocanour.

APPENDIX F

WATER SAMPLING PARAMETERS

0000122

DATE: 24 AUGUST '84

PROJECT NO.: JC0104H

LOCATION: JASCO

SAMPLERS: [illegible]

SAMPLE ID: V-1

3BV: 12

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
23.40	Ø								41.5
	2.0		66.7	7.78		1950			
	5.0		66.1	7.18		1810			
	9.0		65.9	7.15		1830			
	12.0		66.1	7.16		1830			

TIME SAMPLED:

COMMENTS: 3.0 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 27 AUGUST

PROJECT NO.: JCO 1044

LOCATION: JASCO

SAMPLERS: G.G.J.S.

SAMPLE ID: V-2

3BV: 6.0

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
32.01	0								
	2.0		66.1	6.90		1680			
	5.0		65.6	6.88		1760			
	9.0		65.7	6.91		1750			

TIME SAMPLED:

COMMENTS: 4.5 BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 8-28-87

PROJECT NO.: JCO 104H

LOCATION: JASCO

SAMPLERS: P.J. 2.

SAMPLE ID: V-3

3BV: 38 gals

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
22.75	Ø								
	2		67.7	6.73		4070			
	5		67.2	6.75		4080			
	15		67.6	6.75		4070			
	25		67.7	6.81		3990			
	35		67.9	6.82		3970			
	40		67.9	6.80		3980			

TIME SAMPLED:

COMMENTS: 3.16 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 27 AUGUST '87

PROJECT NO.: JCO 104H

LOCATION: JASCO

SAMPLERS: P.F.Z.

SAMPLE ID: V-4

3BV: —

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
24.15	—		67.6	7.11		1770			

TIME SAMPLED:

COMMENTS: Sample taken from Pump Effluent hose

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 8-27-87

PROJECT NO.: JCO 104 H

LOCATION: JASCO

SAMPLERS: [illegible]

SAMPLE ID: V-5

3BV: 5.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
[illegible]	Ø								
	1.0		66.2	7.44		1380			
	2.5		65.6	7.57		1470			
	4.0		65.6	7.56		1480			
	5.5		65.6	7.56		1480			

TIME SAMPLED:

COMMENTS: 3.0 BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 AUGUST '84

PROJECT NO.: JC0104H

LOCATION: JACCO

SAMPLERS: [illegible]

SAMPLE ID: V-6

3BV: 14.6

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
2.4.38	∅								
	2.0		67.4	7.41		1340			
	5.0		66.4	7.32		1350			
	10.0		66.6	7.21		1370			
	15.0		66.4	7.23		1390			

TIME SAMPLED:

COMMENTS: 3.08 BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 8-28-87

PROJECT NO.: JCO 104 H

LOCATION: JASCO

SAMPLERS: G.J.R.

SAMPLE ID: V-7

3BV: 6.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
23.02	∅								
	2		69.0	7.03		3080			
	4		68.8	6.99		3140			
	6		68.7	7.01		3160			
	7		68.7	7.02		3130			

TIME SAMPLED:

COMMENTS: 3.23 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 27 AUGUST '87

PROJECT NO.: JC0104H

LOCATION: JASCO

SAMPLERS: [illegible]

SAMPLE ID: I-1

3BV: 15.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
24.91	Ø								
	1.0		66.5	7.67		1290			
	5.0		66.3	7.54		1330			
	10.0		66.3	7.40		1300			
	15.5		66.2	7.40		1300			

TIME SAMPLED:

COMMENTS: 3.0 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 8-25-87

PROJECT NO.: JCO 104 H

LOCATION: JASCO

SAMPLERS: G.F.L.

SAMPLE ID: I-2

3BV: 15.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
23.77	Ø								
	2		72.1	10.64		1110			
	5		70.4	8.22		1270			
	10		67.5	7.38		1400			
	12		67.6	7.37		1390			
	15.5		67.5	7.26		1400			

TIME SAMPLED:

COMMENTS: 3.0 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 8-28-87

PROJECT NO.: JCO 104H

LOCATION: JASCO

SAMPLERS: Q.F.2.

SAMPLE ID: I-3

3BV: 15.5

Water Level	Gallons Removed	Time	Temp. C°	pH	Eh (mV)	Cond. (micromhos)	DO mg/l	Q GPM	BOH
23.50	Ø								
	2		69.8	7.59		1280			
	5		67.8	7.46		1290			
	10		67.5	7.45		1280			
	15.5		67.4	7.44		1280			

TIME SAMPLED:

COMMENTS: 3.0 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
	EPA 601
	EPA 602

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 Sept. '87

PROJECT NO.: JCO 104H

LOCATION: JASCO

SAMPLERS: [illegible]

SAMPLE ID: V-1

3BV: 12.0 gals

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	Ø								48.0
	1.0	1:34	65.8	7.62		1920			
	3.0		65.5	7.55		1910			
	5.0	1:41	65.2	7.31		1910			
	7.5		65.4	7.31		1870			
	10.0	1:49	65.3	7.27		1880			
	12.0	1:52	65.4	7.31		1870			

TIME SAMPLED: 2:00

COMMENTS: Turbidity = 12 NTU
3 BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
X	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 25 Sept. '87

PROJECT NO.: JCO 104-H

LOCATION: JACCO

SAMPLERS: [illegible]

SAMPLE ID: V-2

3BV: 6.0

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	0								350
	1.0	2:45	64.5	7.04		2320			
	2.0		64.3	7.09		2310			
	4.0		64.3	7.11		2290			
	5.0		64.4	7.11		2300			
	6.0	2:55	64.3	7.12		2300			

TIME SAMPLED: 3:00

COMMENTS:

Turbidity not tested (>100 NTU)

3BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
X	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 25 Sept. '87

PROJECT NO.: JCO104H

LOCATION: JASCO

SAMPLERS: P.F.2.

SAMPLE ID: V-3

3BV: 38 gals

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	ϕ								35.0
	1.0	1:22	66.6	7.01		3340			
	5.0		66.4	6.99		180			
	10.0	1:27	66.4	7.01		3870			
	20.0	1:34	66.2	7.15		3360			
	25.0	1:40	66.2	7.30		2460			

TIME SAMPLED: 2:00

COMMENTS: Tied 3 bailers together to purge well, Bailed nearly dry @ 25 gals (0.3' left) allowed 20 min to recover and sampled Turbidity not tested (>100NTU)

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	EPA 601
	EPA 602
	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 25 Sept. '87

PROJECT NO.: JCO 104 H

LOCATION: JACCO

SAMPLERS: [illegible]

SAMPLE ID: V-4

3BV: 5.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	∅								35.0
	1.0	2:12	65.0	7.33		490			
	2.0		64.8	7.38		710			
	3.0		64.8	7.36		1580			
	4.0		64.9	7.39		1560			
	5.5	2:21	64.8	7.32		1590			

TIME SAMPLED: 2:25

COMMENTS: Turbidity not tested (>100NTU)
3 BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 Sept. '87

PROJECT NO.: JC0104H

LOCATION: JASCO

SAMPLERS: P.J.L.

SAMPLE ID: V-5

3BV: 5.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	0								36.5
	1.0	2:25	65.5	7.93		1440			
	2.0		65.2	7.84		1470			
	3.0		65.1	7.77		1480			
	4.0		65.1	7.72		1480			
	5.5	2:35	65.1	7.71		1480			

TIME SAMPLED: 2:40

COMMENTS: Turbidity = 13 NTU
3BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
X	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 Sept. '87

PROJECT NO.: JCO 104 H

LOCATION: JASCO

SAMPLERS: G.T. S

SAMPLE ID: V-6

3BV: 14.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	Ø								42.7
	1.0	2:58	66.7	7.50		1240			
	3.0		66.5	7.52		1410			
	5.0	3:05	66.3	7.52		1350			
	8.0		66.2	7.45		1230			
	11.0		66.1	7.56		1390			
	13.0		66.1	7.50		1380			
	15.0	3:17	66.2	7.50		1350			

TIME SAMPLED: 3:21

COMMENTS: Turbidity = 76 NTU
3.1 BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
X	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 25 Sept. '87 **PROJECT NO.:** JCO 104H

LOCATION: JASCO **SAMPLERS:** P.J.Q.

SAMPLE ID: V-7 **3BV:** 6.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	∅								35.5
	1.0	11:01	67.3	7.20		60			
	2.0		67.0	7.21		60			
	3.5		67.0	7.21		1850			
	4.5		67.0	7.23		2390			
	5.5		66.9	7.24		640			
	6.0		66.9	7.24		580			
	6.5	11:14	66.9	7.25		540			

TIME SAMPLED: 11:15

COMMENTS: Turbidity not tested (>100 NTU)
3BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
x	EPA 601
x	EPA 602
x	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 25 Sept. '87

PROJECT NO.: JC0104H

LOCATION: JASCO

SAMPLERS: PJ. 2

SAMPLE ID: I - 1

3BV: 15.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	ø								57.5
	1.0	12:22	65.7	7.72		920			
	3.0		65.6	7.74		130			
	5.0	12:28	65.6	7.68		160			
	8.0		65.4	7.64		760			
	10.0	12:34	65.4	7.67		780			
	12.0		65.2	7.55		200			
	14.0	12:42	65.2	7.64		300			
	16.0		65.1	7.62		380			

TIME SAMPLED: 12:45

COMMENTS: Turbidity > scale (>100 NTU)

3.1BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
✓	EPA 601
✓	EPA 602
✓	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 Sept. '87

PROJECT NO.: JC0104H

LOCATION: JASCO

SAMPLERS: G.J.Z

SAMPLE ID: I-2

3BV: 15.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	∅								55.0
	1.0	11:17	67.9	7.55	—	1350			
	2.5		67.0	7.67		1350			
	5.0	11:23	66.0	7.67		1390			
	10.0		65.5	7.60		1370			
	15.5	11:25	65.4	7.62		1370			

TIME SAMPLED: 11:40

COMMENTS:

Torbidity = 30 NTU

3BV

SAMPLES TAKEN	
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
X	EPA 604

Wahler Associates

WATER SAMPLING PARAMETERS

0000122

DATE: 24 Sept. '87 **PROJECT NO.:** JCO 104 H

LOCATION: JASCO **SAMPLERS:** P.F.2

SAMPLE ID: I-3 **3BV:** 15.5

WATER LEVEL	GALLONS REMOVED	TIME	TEMP. C°	pH	Eh (mV)	COND. (micromhos)	DO mg/l	Q GPM	BOH
	∅								54.5
	1.0	12:20	67.8	7.73		1230			
	2.5		67.2	7.71		1220			
	5.0	122.6	66.1	7.69		1230			
	10.0	12:21	65.8	7.66		1250			
	12.5		65.7	7.65		1220			
	15.5	12:39	65.8	7.66		1230			

TIME SAMPLED: 12:40

COMMENTS: Turbidity: 81 NTU

3BV

	SAMPLES TAKEN
	EPA 624
	EPA 625
	EPA 608
	METALS
	CYANIDE
	CHLOR., SULF., etc.
	ASBESTOS
X	EPA 601
X	EPA 602
x	EPA 604

Wahler Associates